AMERICAN GAS ASSOCIATION MONTHLY

MAY · 1937

Natural Gas Convention, May 10-14

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Over twenty pages of additional material have been added.

The general section on servicing has been revised to include low temperature ovens, regulators, new styles of burners and many other recent developments.

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A loose-leaf ring binding is employed so that the pages will lie flat when opened, and so that new material may be easily inserted.

Price $1.00 per copy

AMERICAN GAS ASSOCIATION

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AMERICAN GAS ASSOCIATION MONTHLY

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How to convert a smudged basement into a marine room with an illusion of a steamer's deck which is certain to interest lovers of the sea, is demonstrated by the Grand Rapids Gas Light Company in its re-styled home service department. Note the gas water heater and heating equipment on the right. Other model basements and kitchens by this company will be shown in the June issue of the A. G. A. MONTHLY

AMERICAN GAS
ASSOCIATION
MONTHLY

James M. Beall, Editor

"The Show Is On"

By GEORGE E. WELKER
Chairman, Natural Gas Department

THE natural gas show will soon be on at Kansas City, Missouri; opening with a bang on May 10 and closing with that happy feeling of a job well done on Friday, May 14, and, what a show it will be, unparalleled in history for its opportunities for acquaintanceship, education, and helpful cooperation.

The Natural Gas Department Program Committee, in collaboration with the Association of Gas Appliance & Equipment Manufacturers, has staged, for your delectation, in Kansas City's new six and one-half million dollar Auditorium, a Convention and Exhibition so good that you just can't afford to miss it. The arrangements have been planned and completed so they will appeal to members of the Gas Industry, the country over. Regardless of your section of the country or the nature of your work, you will find at the Kansas City meeting just the information you are looking for.

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Sunday, May 9, will witness the official opening of the Association of Gas Appliance & Equipment Manufacturers' beautiful and complete exhibit in the main exhibition hall of the Auditorium.

Monday morning, May 10, will be devoted to committee meetings, and on Monday afternoon the convention program will start in earnest with the first of the daily general sessions, all of which will be characterized by excellent and interesting speakers.

Commencing with Wednesday afternoon, May 12, parallel sessions have been arranged for Production, Utilization and Sales Promotion, Transmission and Industrial features of the industry, respectively, which will provide diversification of program sufficient to meet the fondest wishes of any and all those lucky enough to be in attendance.

Chairman Welker

One of the most interesting programs ever presented at a general session has been arranged for Friday morning, May 14. On this program will appear 6-year-old Barbara Jenkins of Denver, Colo., who has made an exceptional reputation in various parts of the country in giving interesting and enjoyable cooking demonstrations. Barbara will put on one of her typical demonstrations, giving the natural gas men at the convention an opportunity to see for themselves that even a child can cook with a modern gas range.

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Mrs. B. C. Adams' efficient committee has arranged a delightful entertainment program for the attending ladies, and the Natural Gas Department's annual banquet and dance on Wednesday evening will as usual provide the high spot in the entertainment program for both men and women. The Stag Smoker and Athletic Show on Tuesday night will provide the male contingent with an excellent opportunity to get together and swap yarns, etc. Also, Major Strickler and his efficient corps of helpers will be on constant call to help make your visit in Kansas City a most pleasant one.

So, make your plans now and get your reservations in for the A. G. A. Natural Gas Department's Annual Convention and Exhibition at Kansas City.

All Set for the Natural Gas Convention

By ROBERT W. HENDEE
Vice-Chairman, Natural Gas Department

Vice-Chairman Hendee

THE time is rapidly approaching for another meeting of the Natural Gas Department of the American Gas Association. But this year's meeting will not be "just another" convention.

To be held in Kansas City in May, from the tenth to the fourteenth, inclusive, the entire program, including the social events, portends the very best meeting in the history of the Natural Gas Department. Every effort has been made to secure able speakers to present interesting topics.

The location of the meeting place at Kansas City cannot be improved upon. Centrally located as Kansas City is geographically, and thus also with reference to the natural gas industry, everyone expects this gathering of natural gas men to bring out the largest registration of any similar meeting in the history of the association. Furthermore, there can be no excuse for not having a large attendance in all of the sessions, because the downtown hotels are all located within two or three blocks of the new City Auditorium.

Incidentally, all of the above hotels report the largest early registration in their history. The headquarters hotel, the Muehlebach, has long since filled all of its rooms which were reserved for the occasion. There are still plenty of rooms left in the other hotels, but it is advisable not to delay in making reservation if a close-in room is desired.

The new City Auditorium, in which will be housed both the meetings and the exhibits, is an attraction in itself. We are told by those who have seen it, that it is one of the finest structures of its kind in the entire country. Recently completed at great cost, it is said to be an ideal place in which to hold meetings and have exhibits.

Merrill N. Davis, vice-president, A. G. A. E. M. and chairman of the Exhibition Committee

For the first time since the May meeting in 1929, manufacturers of gas appliances and equipment will have an exhibition of their latest wares in connection with the meetings. These exhibits are being sponsored by the Association of Gas Appliance and Equipment Manufacturers, and should be of tremendous value to all in attendance. At this writing over sixty-five manufacturers have made arrangements for space. It is felt that these exhibits will prove of more interest than those shown in Atlantic City due to the fact that more of the heavy natural gas equipment will be shown.

The program committee, in outlining the meetings, felt that not only should everyone spend some time among the exhibits for the benefit which they individually can derive, but that this was due the manufacturers to show the appreciation of the industry for the new organization and for the expense it will be subjected to in bringing the exhibits. Consequently, no program nor any meetings have been planned for Tuesday afternoon in order to give everyone a free afternoon for browsing around in the exhibition hall.

Mrs. B. C. Adams, wife of the vice-president and general manager of The Gas Service Company, Kansas City, who is chairman of the Ladies' Entertainment Committee for the convention

The program itself has been planned to bring before the members all that is new in every branch of the industry. Of interest to all should be the personal appearances of two of the gas industry's outstanding headliners, viz. little Barbara Jenkins, the 6-year old cooking marvel of Denver, and the well-known "Mystery Chef" of radio fame.

During the last part of 1936, and so far this year, the natural gas industry has come out of the doldrums and has shaken off its inferiority complex to an amazing degree. It must not slacken its pace nor lose its "pep" for one instant. With this in mind, the program committee has said, "Off with the old, and on with the new."

Come to Kansas City May 10 to 14 and take part in the best Natural Gas Convention on record.

Natural Gas Makes New Records*

By WILLIAM TRAVERS

ANY product which offers both superior quality and lower cost will inevitably "go to town." Natural gas is such a product. Over large and growing areas of this country it is now the No. 1 fuel because of its cheapness, efficiency and convenience.

In the utility picture the electric power division has long held the limelight, both because of dynamic growth of consumption and because of bitter political attack. The current expansion in demand for natural gas is equally dynamic, possibilities of percentage gain over the long term are probably greater than those in electricity and the industry is far less vulnerable to political attack or "yardstick" competition than is electric power. Certainly this is worth mulling over if one has, or contemplates having, either an investment or a speculative stake in the field of public utilities.

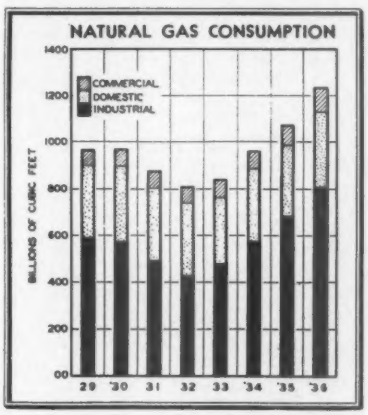
Rise Exceeds Electricity

During 1936 gross revenues from natural gas increased by 11.6 per cent, while gross revenues of the electric power industry were up by 7.6 per cent. Domestic revenues from natural gas increased by 6.9 per cent; domestic electric revenues by 3.6 per cent. Revenues from industrial use of natural gas were up 21.2 per cent, those for industrial consumption of electricity were up 13.4 per cent.

In terms of physical volume, the 1936 gain in natural gas was 18.8 per cent; that in electricity was 13 per cent. Industrial sales of natural gas increased by 23.9 per cent in physical volume, against comparable figure of 19 per cent for electricity. Gain in domestic volume of natural gas was 9.4 per cent or slightly lower than 10 per cent increase in household use of natural gas.

Thus, in physical volume and even more so in dollar revenues, the trend of natural gas is more strongly upward than that in electric power. Comparison with manufactured gas is likewise pertinent, the revenue gain in this division last year having been only 1.4 per cent, against 11.6 per cent for natural gas, despite large gains in use of both manufactured and natural gas in house heating.

Use of natural gas is not only growing far faster than that of manufactured gas but already is producing more revenues than manufactured gas. The respective sales totals last year



were $396,802,000 for natural gas and $376,736,000 for manufactured gas, although the latter sum was paid by 10,177,000 consumers, while natural gas consumers numbered only 6,324,000. It need hardly be observed that the combination of larger gross and much smaller number of customers gives natural gas a decided advantage in cost factors and profits, quite aside from the basic advantages that, first, it is cheaper to take natural gas from the ground than to make gas from coal, and, second, that the cost of large tank storage facilities required in handling manufactured gas is not present in natural gas.

Local use of natural gas dates back many centuries before the dawn of the petroleum era. For example, it is of record that the Chinese sank bamboo pipes and tapped underground gas for various uses fully a thousand years ago and centuries ago the city of Genoa, Italy, was lighted by natural gas piped from Parma. More than a hundred years ago natural gas was being used in a small way for illumination at several localities in this country, but this cheap and marvelously efficient fuel—its heating efficiency is nearly twice that of manufactured gas—began to be taken seriously only about 1870 when it was released in large quantities incident to early development of the rich Pennsylvania oil fields.

Wooden pipe lines made from pine logs were used to carry natural gas to nearby localities, both for illumination and as fuel for industry. One such 8-inch pipe line was run from the Pennsylvania fields to Rochester, N. Y. Iron pipe lines came into use in 1872, the first being little over five miles long. For years thereafter as petroleum development spread to the Mid-Continent, the Southwest and California, the natural gas was released as a by-product of the crude oil wells, with most of it being either wasted or consumed in the immediate locality. Meanwhile electricity was replacing gas for illumination and both for that reason and the absence of pipe line facilities with which the gas could be carried to large markets the industry did not invite exploitation by large capital.

Natural Gas Expansion

Even though Eastern capital began to filter into natural gas projects in the Mid-Continent area about 1912 and thereafter some semblance of order and unified management replaced utter chaos and waste, as late as 1925 natural gas was being used in important volume only in the western Pennsylvania-Ohio-West Virginia field, in the Kansas-Oklahoma-Texas field and on a smaller scale in southern California, in Wyoming, Louisiana and Arkansas.

Then came a new day in natural gas. The two largest natural gas reserves in the world were discovered at Amarillo, Texas, and Monroe, La. These supplies were immensely larger than could be utilized over any nearby area. A method had to be developed to carry the gas to distant markets. Out of that search came perfection of welded steel

* Reprinted from *The Magazine of Wall Street*, February 27, 1937.

pipe, non-permeable and capable of withstanding high pressures.

From 1927 to 1930 trunk pipe lines were pushed out rapidly through dozens of states. Expansion virtually ceased with the depression and the ebbing of industrial demand for fuel, but the foundation of a vast distributing system had been laid. With the economic recovery of recent years a second era of expansion in distributing lines began, with construction of many lines of fifty to two hundred miles in length, branching off from trunk lines and bringing scores of additional communities into the area served.

Pipe Line Extensions

During the past year more than 2,000 miles of pipe line extensions have been built or initiated. The most important of these projects brought natural gas to the big Detroit market, fourth largest city in the country; and another brought natural gas to the outskirts of Philadelphia. In addition to these cities, some of the others now served either with natural gas or a mixture of natural and manufactured gas include Chicago, Minneapolis, St. Paul, San Francisco, Los Angeles, Buffalo, Rochester, Cleveland, Salt Lake City, San Antonio, Dallas, Birmingham, Atlanta, Terre Haute, Indianapolis, Pittsburgh, Cincinnati, Toledo and many other smaller communities.

A glance at a map of the country's natural gas trunk lines will show that the heaviest concentration is in the states of Kansas, Oklahoma, Texas, Arkansas and Louisiana; in western Pennsylvania, Ohio and West Virginia; and in California. Important areas reached not at all include Wisconsin, North Carolina, all of New England and all of New York State east of Syracuse and Elmira. States important in population or industry or both and in which natural gas markets have been only partially exploited include New Jersey, Pennsylvania, Delaware, Maryland, Virginia, Illinois, Kentucky, Tennessee and Missouri.

The consumption figures heretofore sketched, a total of 1,233,753,000,000 cubic feet last year, exclude natural gas used "in the field" and in carbon black manufacture. Addition of those two outlets would add nearly 800,000,000,000 cubic feet to consumption. Because of use of natural gas either in gasoline refining or in making carbon black, it will be observed that heaviest consumption is in the heaviest producing states, namely, Texas, California, Oklahoma and Louisiana in the order stated. Largest number of individual customers, however, is in Illinois, followed by Michigan—thanks to Detroit—and western New York State.

Markets

In general terms, the two most promising potential markets for natural gas are, first, industry—which now takes upward of 60 per cent of all natural gas sold and which is subject to considerable further application of gas as fuel—and, second, house heating. A trend toward gas for house heating is strikingly shown even in the manufactured gas industry, for whereas last year consumption of manufactured gas for domestic purposes other than house heating declined 1.9 per cent, consumption for house heating increased 16.7 per cent. Although nearly 1,500,000 gas ranges were sold last year, a figure more than equal to the total of all electric ranges in use, less gas is consumed by the modern and improved ranges; and although sales of gas refrigerators were up by some 50 per cent last year this additional load likewise is a small percentage of the total market.

House Heating Gains

With house heating of course, it is a different story and the potential market is many fold greater than that in any other domestic application. In this use manufactured gas has been able to make substantial gains, although the market has barely been scratched, because of its efficiency and convenience, free servicing of furnace equipment as a rule by the supplying utility, promotional rates, low cost of equipment and—by no means the least important factor—curtailment of heat losses by modern insulation. All of these factors apply to natural gas which besides has the advantage of rates which on a national average are much lower than those for manufactured gas.

The three most widely used domestic fuels are oil, anthracite coal and gas. Roughly, cost of fuel oil is about 34 cents per 1,000 B.t.u.; that of anthracite coal about 41 cents; and that of natural gas around 50 cents. Both oil and coal have an edge in cost, but not enough in the minds of an increasing number of home owners to offset convenience, adaptability and cleanliness of gas and low depreciation of gas equipment. In competition with oil burners particularly, emphasis on prompt and free service by most gas utilities is converting many customers to gas. This home heating market is in its infancy and clearly appears destined for large growth in coming years.

We have heretofore discussed markets and potential markets chiefly. The other side of the picture, and equally vital, is that of reserves of natural gas. Here one is in something of a no man's land. On the basis of present consumption the life of the Appalachian

(Continued on page 198)

Courtesy A.G.A.E.M.

So, You Want To Know What National Advertising Is Doing for *You?*

FEW members of the gas industry have had the opportunity to view the national advertising campaign from such an advantageous position as Mr. Olcott. First, as former advertising manager of The Philadelphia Gas Works Company; second, as a member of the Copy Committee; and, third, as a staff member of an advertising agency, Mr. Olcott has been actively interested in the campaign. From this three-way approach, he has emerged strong in his support of the campaign but insisting that tie-up at the point of sale will determine its ultimate effectiveness.

H. W. Olcott

By H. W. OLCOTT

Daniel Starch & Staff, New York, N. Y.

HARRY, did you ever *see* such a gorgeous kitchen? . . . . My, my, would *I* like to step into that. . . . . And say, look at this—a *gas* range! . . . . Well, can you *fancy* it? A *gas* range! . . . . Why, I had no idea they were as good looking as that. . . . . Maybe I better go down and see them before we sign up for that new electric range you promised. . . . ."

Roughly, that's what Mabel is saying to friend husband and Mary is saying to her John today in a thousand different homes all over the country as she sits down after supper to glance over the latest copy of her favorite magazine.

Does it mean that she is really going to come into the gas company showroom bright and early tomorrow and ask the clerk to send out "one of those darling stoves with the blue handles that was advertised in this month's *Good Housekeeping*"? No, the chances are she will forget all about it by morning.

Well, what does it mean then? It means that women are beginning to notice something different in the modern kitchen picture. But more significant than that, it means that they are beginning to wonder if they've been right in thinking that only electric cooking is modern—in a word, that national advertising of Gas is slowly beginning to "sink in."

Perhaps that doesn't seem like much return for the 4 cents per meter your company put up last year to make Gas the nation's choice of modern fuels. Perhaps you can't see where your own range sales have broken any records because of it. What *you* want is tangible, dollars and cents results.

All right, then, let's consider it from this angle. While the gas business has been drowsing these many years—a sister industry has been out selling *our* customers on the superior merits of their way of cooking—with an aggressiveness and an advertising budget ten times more potent than ours. In attacking a market we thought was exclusively ours, that industry has had the advantage not only of generous national publicity but of a modern product that excites the imagination, while we have had the much harder job of defending, without outside support, an apparently unromantic, commonplace fuel.

But, in less than eight months and on an appropriation of less than $500,000 national advertising for gas has made people pause in their headlong rush to attain that alluring "ideal" of an all-electric kitchen and has given Gas at least an equal standing with electricity in the home modernization plans of the country. In the face of these odds, the wonder to me is that it could have accomplished so much in so short a time.

Besides establishing a new respect for this old, familiar fuel in the minds of thousands of customers, national advertising has more than repaid its cost in many ways. To an industry largely composed of small, individualistic operations it has given a common cause, a rallying point in the defense of mutual interests.

Not the least of its benefits, too, has been the effect upon the morale of our personnel. National advertising is reselling our employees on Gas, giving them renewed faith in the future of the business and, on many properties, greatly stimulating employee load-building activities. Likewise, the appliance dealers in many communities, when the campaign is fully explained to them, are recognizing the market being created for them and aggressively promoting modern gas equipment in cooperation with the local gas company. And appliance manufacturers, foreseeing the results of this effort to create greater public acceptance for Gas, are beginning to swell the chorus with national advertising of their own.

Viewed in this light, national advertising is unquestionably a paying proposition and the money you have contributed for its conduct has indeed been well spent. If you expected more benefits from it than you have actually received, then I say that the fault is not with the advertising but very likely with you.

What have you done to capitalize on the impression which all those Mabels and Marys have gained from reading our national advertising messages that there is nothing more modern than Gas? Have you made any real effort to convert that new customer acceptance into sales of modern gas appliances? Of course, you ordered some of the blow-ups of magazine ads to put in your windows and electrotypes of the national slogan to drop in your newspaper ads and perhaps you used the price tags and employee letters offered by the national committee. But,

with a few notable exceptions, local gas companies are not making the most of this great opportunity and that, in my opinion, is the greatest weakness of our program to date.

Experienced national advertisers, like the florists and paint dealers, will tell you that the best campaign ever devised will never produce sales for the local dealer who fails to identify himself and his merchandise with the national theme. If you just sit back and expect the money you contributed to the national campaign to make appliance sales fall in your lap, you are due for a big disappointment. National advertising cannot succeed without strong support and harmonious action at the point of sale.

How To Tie-in

Well, what should you do about it? First of all, make up your mind that you've got to spend some money to land those sales that national advertising is hatching up for you. Then, set up a budget big enough to provide a consistent, week-in-and-week-out schedule of tie-up advertising. Make sure that you have not only ordered but are intelligently *using* all of the tie-up material offered by the A. G. A. that can possibly be adapted to your situation. Then, take a walk around your showroom, study your current advertising and sales promotion program and see if you can't find other opportunities to associate your company and appliances with the national story.

The A. G. A. portfolio of ready made tie-up materials covers only the obvious, fundamental methods of coordination. Some companies are reproducing the national magazine pages over their own signatures in local newspaper advertisements simultaneously with the appearance of the national publications. That's perfect coordination—a splendid idea. Others are using the standard elements and pictures from the magazine ads in their bill stuffers and direct mail literature. Another effective tie-in could be arranged by displaying in your show window the range illustrated in current magazine advertisements with a giant blow-up of the complete kitchen picture as the background.

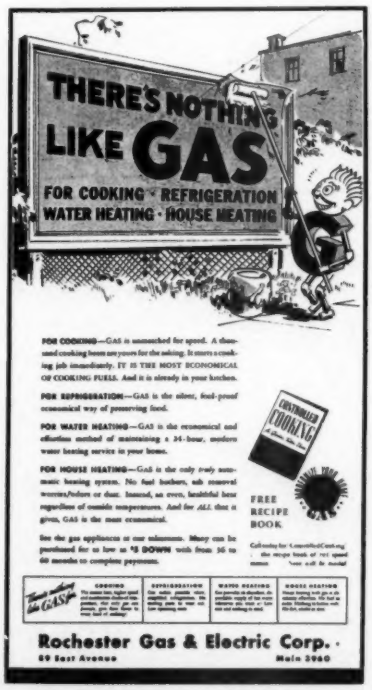
Induce your dealers to do the same whenever a range which they handle appears in the national advertising. Your own ingenuity should provide you with many other locally effective tie-up ideas.

Here's Opportunity

Don't miss seeing "Penny Wisdom," M-G-M's latest technicolor one-reeler —a 100% gas appliance picture. Better still, get in touch with the manager of the local theater which will show this film and help him promote it to your mutual advantage. All Loew theaters and many independent movie houses will show this outstandingly fine production.

The important thing to remember is that the more frequently and forcefully you register in the minds of your customers the relationship between your company and the national advertising—and the fact that the smart modern appliances which they admire in the magazine ads are available at your showroom —the more you will benefit directly.

Opinions differ, of course, as to the merits of the particular style and theme being used in our national advertising copy. But I think that is to be expected. I have never been able to find any *two* people—let alone a whole industry—who ever agreed that an advertisement was 100 per cent satisfactory. Considering our lack of previous experience in national advertising and the diversity of policies and thinking which exists in our industry, I believe the national advertising committee has done a remarkably fine job.



Recent advertisement of the Rochester Gas & Electric Corporation which ties in with the national campaign

Prepared by an able advertising agency the copy sells modern gas service as a means to more healthful, comfortable and happier living. The smart modern style of the illustration and type reflect the same qualities in our appliances. As the campaign has progressed there has been a noticeable improvement in the copy and illustration used.

Our national advertising campaign has really only just begun. It will be many months before we can hope to overcome the advantage which our competition has gained while we were peacefully napping. Now that we have started it the national advertising program must be continued—not just this year and next, but consistently year after year. For the day will never come when the gas industry can again rest on its oars and contemplate its impregnable position in the fuel market. If we falter in this fight to hold and increase our business—or relax our national advertising effort for even a brief time—we might as well take down our shingle and all start looking for another job.

So, back up your national advertising committee. Tell them that it is essential not only to continue this great cooperative program but that funds should be raised for even broader and more intensive efforts. Then, step up your own local advertising and merchandising to take advantage of the market that national advertising is creating for you—and never let up the pressure. The big plums will fall to those who do this part of the job well.

Another Booster

"The national advertising sponsored by A. G. A. is well planned, well written and well placed to reach millions of housewives who will buy new ranges this year. This awakening of an industry that really knows how to sell ranges will go places for those who tie-in. . . . . It will do much to Sell Modern Ranges of all kinds or we are cuckoo."—*The Load Builder*, house organ of Illinois Power & Light Company.

Behind the Scenes with Seattle's Animated Window Displays

By L. E. LINDSAY

Seattle Gas Company, Seattle, Wash.

THE corner which the Seattle Gas Company occupies is one of the busiest in Seattle. Thousands of people pass it every day to do their shopping, to visit the markets for which the city is famous, to go to the near-by theaters. In this crowd are hundreds—perhaps thousands—of possible customers every day. And it's our job to make the window displays "stop them cold" for a few seconds or a few minutes.

That's the reason for our displays. They're created for the purpose of stopping the passerby, and for telling them, in pictures and action, the advantages of gas for cooking, water heating, refrigeration and house heating.

As another element in the "showmanship" that goes with successful merchandising, whether it be gas appliances or what not, the animated window display has often demonstrated its wide appeal. An outstanding job in this respect has been performed by the Seattle Gas Company. After two pages of photographs were shown in the October, 1936, issue of the "A. G. A. Monthly," Mr. Lindsay was flooded with requests for information on how his displays were constructed and how they operated. This article has been prepared to provide that information.

A complete dinner that lifts out of a kettle cooking over a blue gas-like flame, a 2-baths-for-a-nickel human interest display in three scenes, a window that shows how the whole family benefits from automatic storage gas water heating and a dramatization of the silence of ice-made-with-heat story of Electrolux—these are a few of the displays which have been created within the past two years to stop the crowd.

Magic tricks and moving things have always appealed to us. And we find that people in cities yield to the lure of curiosity just as do the folks in smaller towns. Several years ago we stood spell-bound along the edge of a crowd watching a humorous street vending ventriloquist poking at a squealing rat under a sidewalk—discovering as we watched that there was no rat and that—deep in his throat—the fellow was doing all of the squealing himself. But he got an audience together—and then the sales talk began.

Another thing that interested us in the possibility of moving displays was an automobile display with a brand-new sedan in the window. As we looked the car began to unfold—it opened up displaying its interior loveliness. Every detail of its appointments was pointed out—with animation, where possible.

An unexpected movement, we find, will cause folks to stop, face about and come up to the window—even if the movement is almost out of their line of vision. They'll come up to the window to find out if they are missing something important. After you have them there, the show has to be interesting enough to keep their attention until the complete story is told.

The animated displays which we have been using do carry folks right on through the cycle—from attention-getting to the complete story. Sometimes, having stopped just for a second, they stay to see the action through two or three times. Possibly to try to figure out "how it's done."

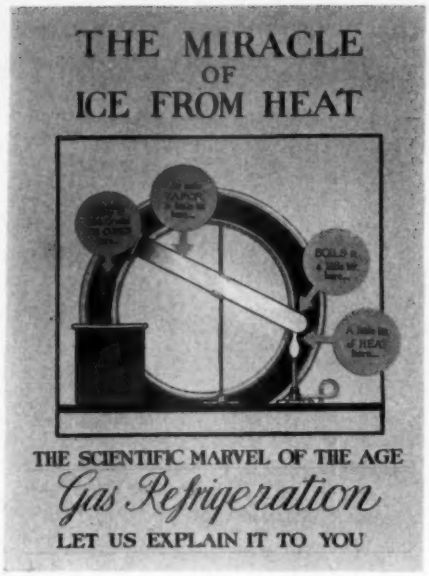
While only detailed plans can show the mechanics of "how it's done," we can tell you how we worked out the various ideas for our displays so that you can adapt your sales stories to action window displays.

Take for example the "Miracle of Ice from Heat" display. We took the cover illustration from a piece of literature sent out from the Servel Electrolux Company. We enlarged it, painted it in color on window display board, cut it out, and our picture was then ready for the animation mechanisms. Probably you can figure out the mechanics of the "action" by a careful study of the pictures. The cycle was—heat applied to a chemist's test tube in which liquid boiled over a small gas Bunsen burner. From the vapors given off by the boiling test tube came a continuous flow of crystal clear ice cubes tumbling into a glass receptical. It is a simple action, but it tells clearly the action of refrigeration by gas.

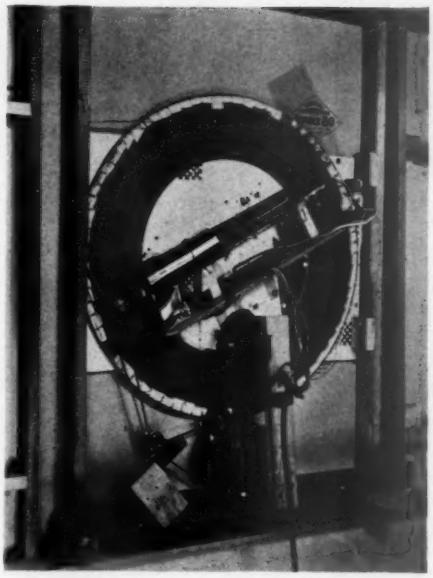
Another idea came out of a sales meeting. A representative of one of the large gas range manufacturers gave a complete cooking demonstration before our salesmen. One of the cooking ideas he demonstrated was "waterless cooking." As we watched, we thought, "There's something our customers and future customers should know about." And from that, we created the display. It was headed, "See the economy of cooking with Gas . . . . the whole meal cooked at one time over one Gas burner, turned low." We borrowed a cooker kettle from an aluminum dealer and played around with the idea a little.

The result was a kettle standing over a lighted gas range burner. The kettle lid rose into space, came to rest several inches above the kettle top—enough space to permit similar action to four other vessels containing the complete dinner—from main course to dessert. When these had been shown, the front of the display closed over the kettle and containers and everything returned to the starting point, to begin the cycle again. Having determined on the act we wished to stage, we began setting up the various mechanisms to perform the operations. We

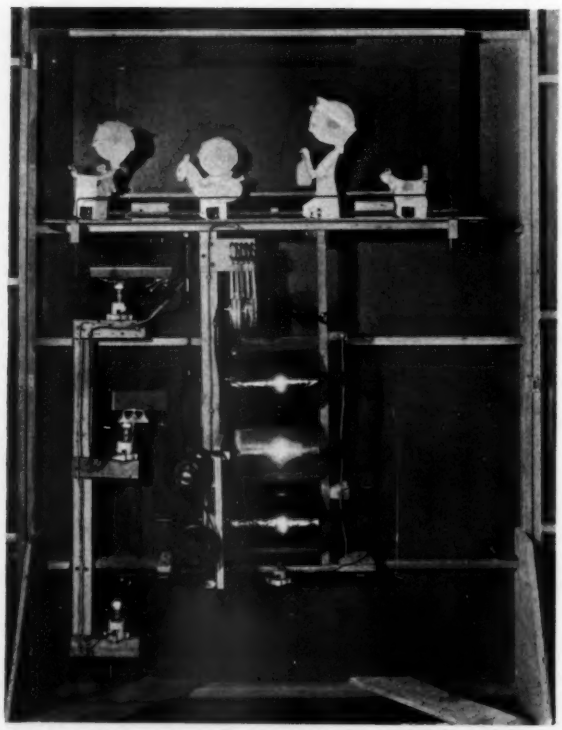
(Continued on page 172)



Refrigeration by Gas—"The Miracle of Ice from Heat" is fully animated. A bright quartz-like flame of a small gas Bunsen burner boils a quantity of liquid in a test tube, forming a vapor that exudes full-sized cold, crystal ice cubes into a glass container. A simple, noiseless, foolproof mechanism has operated this animation faultlessly from 8 A.M. to 11 P.M. for many days



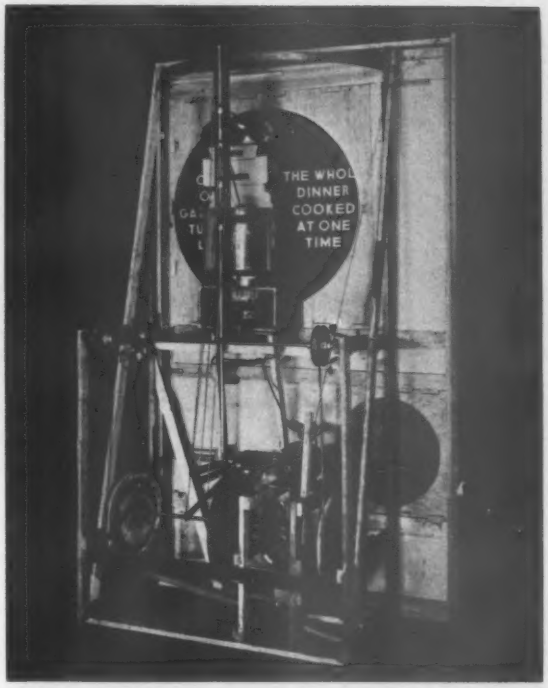
The mechanisms of "A Miracle of Ice from Heat" consist of a motor driving the revolving ring which carries the ice cubes—a revolving glass cylinder animating the chemist's tube, a small light illuminates the Bunsen burner. Note: This same motor and speed reducer as seen are driving the mechanisms of the present, "There's Nothing Like Gas for Water Heating," display



Back stage mechanisms of "There Is Nothing Like Gas for Water Heating" consist of an endless belt conveying the household, 3 shadow drums animate the semi-transparent water heater, 4 contact revolving switch operates the burner, dishes, laundry, and cleaning display lights. Since this picture was taken, mechanism has been added which drives the vacuum cups of the washing machine

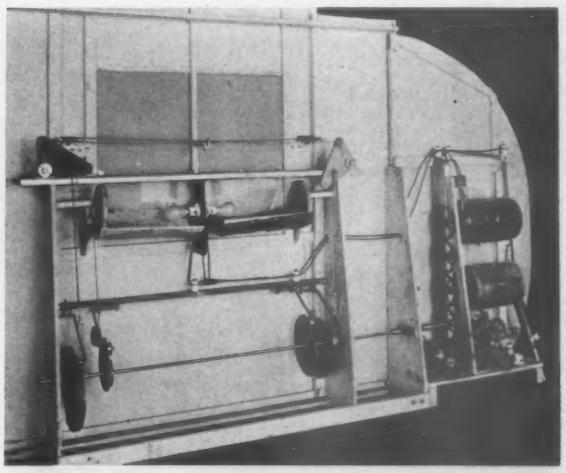
"There Is Nothing Like Gas for Water Heating"—The gas flame snaps on and the storage recovers, the fire snaps off, and the storage hurries an abundant supply of hot water through the pipes to the turn of a faucet in the bathroom, the kitchen and the laundry—the demand being punctuated by a light flashing on—each in its turn. In the upper panel the household passes by on parade to the bathroom

A Message of Importance—The doors shown closed in the picture open and the story of economical, good cooking continues, showing just how much dinner is being prepared. (1) The lid slowly rises alone and comes to a suspended rest. (2) A pudding in glass dish follows alone. (3) Two glass containers of vegetables rise alone. (4) A delicious roast with the usual vegetables rises and comes to rest. (5) The doors close and the cycle repeats. The gas range burner is an object of great interest and many times such questions as these are asked: "How often do you put water in that kettle?" "Doesn't it get pretty hot in there?", etc. This burner is done in two colors of "Neon" tubes within an actual gas burner



Behind stage of "See the Economy of Cooking with GAS"—briefly, 2 outside end cams are duplicates, they open and close the display front, 4 inside cams raise and lower the lid and 3 sections of cooked food

Two Baths for a Nickel—At the left a storage water heater in transparent section is shown, in the center a huge five-cent piece, and at the right a modern storage gas water heater on display. Following is the cycle: (1) Gas burner ignites, the storage fills with hot water, and then fire snaps off. (2) One-half of the nickel opens and, as His Bathtub fills, the storage empties one-half. (3) Other one-half of nickel opens, and Her Bathtub fills, and the storage empties. (4) The gas flame snaps on and, as the storage recovers, the nickel quietly closes and the cycle re-enacts. Two cycles per minute and one revolution of a shaft performs the whole trick. A small 1/20 h.p. motor drives the show



Behind the scenes of "Two Baths for a Nickel" shows the dramatizing mechanisms—the two drums on the extreme right animate the semi-transparent Hot Water Storage—the switch on the upper drum controls the burner light—the two extreme outer cams operate the two halves of the nickel and the two inner cams fill the bathtubs

decided that two cycles per minute would be quick enough to satisfy the average window shopper.

The idea clicked.

Here, in some detail, is the way it was worked out. One important feature of this display was to excite comment. The range burner which reposed on a piece of dark blue velour did that. "Isn't that gas flame hot?" . . . . "Why doesn't it burn the cloth?" . . . . "Why didn't the kettle boil?" . . . . and "Where does the steam go when the lid rises?" were some of the questions asked as a result of the burner action. To make it, we took a new simmer-speed burner, using the aluminum parts only. After sawing the ports of the inner cone so that the light could reflect up from below, we placed a small light blue Neon tube in the main body of the burner.

How It's Done

Then we screwed the top cone of the burner into place and set a dark blue Neon tube into it. The four stems of the tube were extended down through the center of the burner where they were attached to a small transformer set in a metal box. The burner casting was also secured to the box. Around the top of the burner we set a continuous flame plume cut from glassine or celluloid, with flames centering on the burner ports. This material was inserted between the burner castings and secured by a fine silver wire. The Neon tubes were out of vision, but reflected a very hot flame effect through the glassine. Six special cut "Masonite" cams put this display through a cycle of twelve separate movements in one revolution of the shaft. It is driven smoothly and noiselessly by a one-twentieth horsepower motor.

The Automatic Storage Gas Water Heater makes a mighty interesting type of display, too. You can just about go the limit in putting motion into this display for there are so many uses for this appliance. The main thing, we find, is to set up a cross section—in semi-transparency—of the whole heater so that the window shopper can see how it functions from combustion chamber, through the storage chamber, to the flue. The shopper can see the thermostat chill, the burner snap on and hot water storage recover as the fire heats the water, then how the water is held in storage for the turn of a faucet—for bath, shaving, laundry, dishes or cleaning. He sees the hot water hurried through pipes from the storage compartment to the bathroom, the kitchen sink or the laundry—and again, simple mechanisms turn the trick!

We have built moving display

(Continued on page 199)

Inventor of Heat Control Wins Addison B. Day Medal

JOHN H. GRAYSON, famous in the gas industry for the invention of an automatic time control for gas ranges, former executive head of Grayson Heat Control, Ltd., and at present conducting independent experimental and research work at his laboratory at Lynwood, California, was awarded the Pacific Coast Gas Association's highest mark of recognition in the form of the Addison B. Day Medal of Honor on April 2 of this year.

On but two previous occasions have the Board of Directors of this association considered any single individual's contribution to the industry to be of sufficient magnitude to warrant bestowal of this coveted award.

Addison B. Day, president of the Los Angeles Gas and Electric Corporation, in presenting the medal to Mr. Grayson, said:

"In selecting Mr. Grayson as the third member of the exclusive group who have received this award, we hope to express some measure of our admiration and gratitude for his inestimably valuable contributions, not only to the gas industry, but to the nation as a whole. I sincerely believe that the heat control devices which his inventive genius has given to the world are among the most important developments of this century."

Addison B. Day, left, congratulating John H. Grayson, winner of the Addison B. Day Medal of Honor

Considered a leading authority on gas combustion and a brilliant inventive genius in his own particular field, Mr. Grayson has to his credit a number of important heat control devices beside the automatic clock control. His earliest—a snap-action thermostat for gas water heaters—was perfected in 1927.

Prior to that time he was employed in the Bureau of Standards and the Bureau of Mines, specializing in problems of gas combustion. His work in this field was so outstanding that his services were sought by the gas industry, and he spent some time lecturing before groups of gas engineers over the United States.

With the perfection of his first heat control device, he came to Los Angeles, electing to manufacture the mechanism rather than sell the patents. At Lynwood, California, he established Grayson Heat Control, Ltd., the success of which was immediate; and almost immediately he came out with a safety pilot, a device which automatically shuts off the gas supply when the pilot flame on a water heater is extinguished.

The automatic clock control, most elaborate and ingenious of his inventions, was first produced in 1932. This mechanism consists of a time clock which may be set to control the opening and closing of gas valves at predetermined times, automatically lighting and extinguishing the flame on a range burner. Simple, labor-releasing, effective, it has gained wide public acceptance and is rapidly becoming standard equipment on the modern gas range.

In recent months Mr. Grayson relinquished control of Grayson Heat Control, Ltd., selling his interest and arranging for the sale of stock in the company to Reynolds Metals Company of New York. A unique testimonial of his business as well as his inventive genius was a dinner given him by his stockholders at which a loving cup was presented him in gratitude for his able handling of the affairs of the company.

Coincidentally with his receipt of the Addison B. Day Medal of Honor further recognition of his unique abilities was accorded him by the American Gas Association. Herman Russell, president of the association, wired a congratulatory message on the day the award was presented, expressing the entire gas industry's debt of gratitude to Mr. Grayson.

The Gas Industry as a Pacemaker

By HUGH H. CUTHRELL
The Brooklyn Union Gas Company

Hugh Cuthrell

FOR some years we gas men have been talking about competition. We have worried about the inroads of oil in house heating and about coal and oil in water heating. Today we face the competition of electricity in the field of our basic domestic load—cooking.

There is one important difference between today's competition in the domestic field and yesterday's. Today the coal and oil people are organized. Each as an industry is promoting its fuel nationally. Electric interests have for years fostered national promotion. Even the iceman has entered the national promotional field with a campaign for ice refrigeration.

Competition Now Organized

We thought competition from coal and oil severe during the depression years. But that competition was disorganized. Gradually it has welded itself into organized competition in both the coal and oil industries. Each is a strong adversary, eager to replace gas in the water and house heating fields. Each has made severe inroads and is exerting every effort to maintain its gains and to make further advances.

From experience we know that electric competition is organized and will function on a national scale. We faced the competition of electricity in the lighting field and that defeat served as a splendid help in awakening us, in sending us after the cooking and water heating business. We have competed successfully with electricity in refrigeration, thanks to the splendid national promotion and local aid provided by the manufacturer of Electrolux.

Now we have electricity waging a campaign against us in the cooking and refrigeration fields. We have oil and coal as opponents in the house and water heating fields. And these opponents are strong, nationally organized units. They have been sponsoring national promotion as well as local effort to make headway in the struggle. And they will intensify these efforts as time goes on.

Address before Mid-West Regional Gas Sales Conference, Chicago, February 18-20.

A Challenge

What are we going to do? Are we going to sit back and regard these campaigns as factors to be met in our individual communities? Are we going to believe that because today our individual position is satisfactory that we do not have to meet this competition as a national organized industry? Or are the gas companies of this country going to band together to fight this competition as an organized unit?

Certainly if the coal and oil people can organize themselves for national promotion, we should be able to do likewise. If we want, we can get ourselves together for promotion. We can band together as a unit and direct our promotional campaign from a national or regional angle. If we don't, we'll suffer the consequences.

We have already cooperated for national radio and magazine advertising. Let's further them. Forget harping criticism and pet peeves. Let's provide new ideas . . . . contribute new suggestions . . . . talk up gas locally and regionally . . . . tie in with the national effort. In brief let's all get together and boost gas as the modern, economical fuel for domestic services.

Each one of you is fully aware of the Federal government's promotion of electricity. Electrical appliance sales are financed by this campaign. Splendid publicity has been added to the already effective advertising efforts of our electric competitors. Are we going to take this lying down? Or are we going to fight back as a forceful, unified industry?

I know we haven't the powerful manufacturers that our competitors have. I know we can't get anyone to do the things the strong electric manufacturers do. But jointly we ourselves can do a very effective job. A little unity of purpose is needed. We require more gas companies really wanting to promote this gas business. We can do that. Even now we are successfully cooperating in a few promotions. Let's join and give our program national repute and recognition.

In our efforts we can receive aid from our manufacturers. We can prevail upon them to let us help them raise advertising funds for national effort on their part. But we must show them our own sincere interest before we seek their cooperation.

Helping the Dealer

In our campaign we have another factor—a local one. That is the dealer. There are many electric dealers because electrical appliances are sold everywhere. To compete we need plenty of retail outlets. We can't do the local sales job by ourselves. If you try to do it all, you'll find one day that you'll have to do it all—and do it alone. We should get as many dealers as we can. We should make them gas conscious. We should help them become good dealers, building them up so that they are successful. If the dealers become successful and make profits we in turn will profit.

As for financing dealer sales, there are several methods. Many of our companies have had good experience in this field. So I won't go into any detail on dealer financing. You know where you can get full information on that subject. I do, however, want to suggest that we do not force the load onto the manufacturers. Let's cooperate in working out dealer financing for all approved gas appliances.

While we are endeavoring to promote dealer financing and to develop dealers as better gas appliance salesmen, we should also think of our own gas education. Let us ask each other how much we know about gas appliances and their operation. I do not mean just those appliances sold by ourselves but every gas appliance sold in our territories. How much do you

know fundamentally about each make and model being sold in volume to your customers? Have you ever checked with your service men to catalogue and compare "grief" from various appliances in service?

If you have done this, you know full well that we need to have appliances more uniformly made and assembled. Some prominent and widely sold units are the worst offenders. Have you ever known of a new gas range in a customer's home being the very reason for that customer going electric? I have. The range was just no good in operation and couldn't be made much better.

More Research Needed

If you have done some investigating and have tried to learn about gas appliances, you'll join the ranks of those who stand behind our present research. And despite opposition you'll join in the movement for future research. It is a fact that we are now getting results. Yet competition demands that we get more results faster than ever before. And research will get them.

We're up against tough competition. And it is likely to get tougher in the future. To meet this we must get down to brass tacks on selling. We must ask ourselves "why should customers buy gas appliances?" We must find out from them why they did or did not buy gas appliances. We must analyze our market possibilities and attack our market intelligently. We must be surer of the way to reach our customers and then work hard on reaching them. In this we can aid each other by spreading information on our most successful sales efforts. This could easily be accomplished through a joint promotional department.

As we face this competition and the attacks of the others why can't we attack theirs—at a profit. Some business can have as much "counter-attack" value as inherent value. One such is refrigeration. Our gas refrigerator needs no justification outside itself. Its operation speaks well for gas. And it keeps the electric fellow out of a fine market.

Talk up gas refrigeration selling among those companies who "aren't interested." Intensify your own efforts. Get dealer spread in refrigeration. Give the public a better chance to see and learn about gas refrigeration. Do you realize that without gas refrigeration we can have no such things as the "all-gas kitchen" or the "all-gas home"? Wrap up cooking, refrigeration, water heating and house heating in the "all-gas" package. Just try out the value of the "all-gas" idea. Participate in model home efforts on an "all-gas" basis. It doesn't cost much and it does much for our industry.

Look out for any new services which we may be able to perform. Some of us can go into gas engine generation of electricity—and profitably. The finest units in our history are available. Do yon know your possibilities? Or are you afraid the electric people may not like it?

Let's keep on our toes. Let's stick together from one end of the country to the other. Let's cooperate and pass along our good ideas. But above everything let's all be "selling fools."

Alexander Resigns from British Institution

J. R. W. Alexander

THE Council of The Institution of Gas Engineers has regretfully accepted the resignation of J. R. W. Alexander, M.A., LL.B., F.C.I.S., as secretary of the Institution. Mr. Alexander has been appointed general manager of Associated Gas and Water Undertakings, Ltd. and general manager of the East Surrey Gas Company, effective June 21, 1937.

Owing to pressure of work involved by his connection with Associated Gas and Water Undertakings, Ltd., and his other interests, W. H. Bennett, M.Inst. Gas E., is resigning as managing director of the East Surrey Gas Company. He will continue, however, as deputy chairman of the company and will act in a consultative capacity.

Mr. Alexander was appointed, from 650 candidates, secretary to The Institution of Gas Engineers in 1929, in which year the Institution, founded in 1863, was granted a Royal Charter by H. M. King George V. He was especially charged with the reorganization and extension of the work of the Institution and has taken a prominent part in the increasing activities of the British gas industry.

Mr. Alexander initiated and organized the visit of members of The Institution of Gas Engineers to the United States and Canada in 1933, at which time the delegation attended the A. G. A. Convention in Chicago. He was a founder and is a member of the Council of The International Gas Union.

It is interesting to note that Mr. Alexander has decided to identify himself with the holding company movement, now making rapid progress in Great Britain. The Associated Gas and Water Undertakings, Ltd., which he is joining already has fourteen public utility undertakings associated with it. These companies make a total of 2,200 million cubic feet of gas per year and supply 75,000 consumers through 875 miles of main. Three of the companies also supply electricity. The East Surrey Gas Company which Mr. Alexander is also joining makes 610 million cubic feet of gas and supplies 20,000 consumers through 212 miles of main in an area of 120 square miles.

Gas Company Employee Wins National Award

WHAT are the things which make employees like to work for their company?" asked B. C. Forbes recently, offering $500 in prizes for the best replies. The results of the contest were published in Forbes Magazine, April 1. Third prize winner was R. O. Cox, employed in the gas measurement department of the Lone Star Gas Company, Dallas, Texas. Mr. Cox received a special trip to New York City in addition to prize money for his paper which brought national recognition to his company.

A detailed analysis of all the reasons given by the 758 workers who entered the contest follows: 1. Job security, insurance and savings plans, pensions—90%. 2. Opportunity for advancement, training, education—89%. 3. Medical treatment, cafeteria, recreation, etc.—87%. 4. Pride in company, admiration for boss—82%. 5. Personal help and attention from boss, congeniality—71%. 6. Wages, bonus—69%. 7. Working conditions—43%. 8. Employee representation plans—35%. 9. Chance to show individuality, responsibility—30%. 10. Vacation with pay—23%. 11. Hours of work—15%. 12. Pride in work—12%.

It is significant, Mr. Forbes stated, that the awards have gone to companies that have paid painstaking attention to instituting activities calculated to win the approval of their employees.

Your Association—

What It Is *and* What It Offers

III

IT would be difficult to overestimate the importance of the accountant to the gas industry. It would be just as difficult to overestimate the value to the industry of the work performed by the Accounting Section since its organization meeting in 1918. The work of this section has been so broad and its activities have touched so many fields not ordinarily associated with accounting procedure that at one time consideration was given to changing the name of the section to something more inclusive of its activities. However, the name has stuck and its work has continued to touch in some way virtually all of the various departments of the industry from clerical details up to the broad problems of management and public relations.

Hugh W. Hartman, who is secretary of the Accounting and Technical Sections in addition to being assistant manager of the Association, has the distinction of being the oldest staff member in point of service. In fact, his work with a national gas association antedates the organization of the American Gas Association. He was employed as assistant secretary of the old American Gas Institute, which in 1918, combined with the National Commercial Gas Association to form the American Gas Association.

Hugh W. Hartman

Educated in the public schools of Chicago, Illinois, and Kent College of Law, Mr. Hartman immediately became affiliated with the gas industry. His first position was in the collection department of The Peoples Gas Light and Coke Company, Chicago, in 1906. In 1908 he became secretary to the engineer of distribution and, in 1910, was made secretary to the chief engineer of the same company.

His work in a national trade association began in 1915 when he was appointed assistant secretary of the American Gas Institute. He continued with the Institute until the organization of the American Gas Association in 1918 when he was appointed secretary of the Technical Section of the newly formed association. He was appointed secretary of the Accounting Section in 1919. He advanced to the position of assistant secretary-manager in 1925, yet retaining the secretaryship of the Accounting and Technical Sections. This title has since been changed to assistant manager.

Under Mr. Hartman's direction the Accounting and Technical Sections have shown extraordinary growth and development, and have been credited with many outstanding achievements.

The Accounting Section has jurisdiction over all matters relating to accounting and the keeping of customers' records. Because accounting has so vital a part in customer relations, a part of the section's efforts is devoted to that field. It is also concerned with the requirements of regulatory authorities and Federal and State statutes, as well as properly recording and interpreting facts for analyses of operations and financial requirements.

Under the Accounting Section investigations and studies are constantly being made into accounting policies and practices for promoting greater efficiency and economy in handling accounting, both in respect to methods and use of mechanical devices. These studies have produced a long list of authoritative reports on accounting procedure which have made available in the published Proceedings and in articles in the A. G. A. MONTHLY, a wealth of valuable information.

In accordance with the Constitution, the section is headed by a chairman and is managed by him with a vice-chairman and a Managing Committee. The section secretary, a permanent member of the Association staff, is responsible for following up and reporting the activities. The executive group is assisted in larger matters of policy by an Advisory Committee. The chairman of the section is an ex-officio member of the Executive Board and a vice-president of the Association.

Major divisions of the section's work as originally outlined by the Advisory Committee have for the last few years been delegated to the following committees: Accounting Machines, Customer Relations, General Accounting, Customer Accounting, Office Management, and Uniform Classification of Accounts. These committees not only have carried on extensive studies of the problems assigned to them but also have acted as clearing houses whenever specific information was requested on accounting problems.

One of the most important functions of the Accounting Section has been a study of office labor-saving devices, and great strides have been made in recent years in the reduction of local office detail. The adoption of the Baltimore loose leaf ledger plan of customer accounting by the gas industry generally was brought about largely through the efforts of the Accounting Section. This system, which was a radical departure from existing practice, resulted in the abolishment of bound ledgers for customers' accounting. It was hailed as a great achievement and has resulted in large savings. Many improvements in the original plan have been made by subsequent Accounting Section committees.

During the past decade one of the outstanding developments in public utility accounting has been the mechanization of the accountant's job. In this development the Accounting Section has had a most important part. Through the work of regular committees, it not only has helped to bring about the adoption of modern machine accounting but also, as a result of cooperation with manufacturers, machines have been designed to fit the specific needs of the industry. As a result, the huge task of recording and billing thousands of accounts at regu-

lar intervals has been greatly simplified and made more accurate.

Since the interested executive cannot be expected to possess an intimate knowledge of all types of mechanisms best designed to fit his requirements, the Accounting Machines Committee has carried on studies to provide this information. This problem has been approached from two angles: First, a summary of the developments that have been effected in machine accounting equipment, and second, the presentation of a series of papers describing the practical application of this equipment to customer accounting in leading utility companies. Another important feature of this committee's work has been the compilation of accounting "wrinkles," consisting of contributions of suggested short cuts in accounting procedure.

Going further into the field of customer accounting, another committee considers activities relative to the keeping of customers' records, meter reading, billing, credit and collection systems, cash deposits and their disposition, and other related subjects. Detailed reports of entire systems of many companies have been prepared by this committee as well as studies made of special phases of customer accounting.

Customer Relations Studies

While customer relations are not confined to the departments in the jurisdiction of the Accounting Section, some of the most important work of the section has been accomplished in this field. An exhaustive study has been made of all practical ways in which the relation of a utility with its customers can be improved through better selection and development of personnel and a more efficient coordination of the order-taking and order-executing departments of gas companies. Contractual relations with customers and credit and collection policies as they affect the customer's attitude toward the company have been analyzed so that companies can follow up their good will campaigns with policies in these departments designed to give maximum service with minimum of friction in operation.

In recent years the General Accounting Committee has made studies of and issued detailed reports on such subjects as: budgetary control, court and commission decisions affecting accounting and finance, internal auditing controls, preservation of records, coding systems for accountants and similar subjects. The scope of this committee's work has been defined as the consideration of problems coming before accounting executives for disposition, and the review and practical application of general accounting principles in order to develop clear available facts regarding such matters for use of executives, department heads, legislative bodies, etc.

One-Day Conferences

However, in the past year, the work of this committee has been primarily devoted to developing an exchange of views among accounting executives on problems primarily brought out by revision of the Uniform Classification of Accounts and recent legislation. Two means have been adopted: (1) The holding of one-day conferences of accounting executives where methods of handling the above problems are thoroughly discussed; (2) Selection of a number of the more important problems for the exchange of information by mail through a special group of cooperating companies on actual methods of procedure at present followed by these companies.

An important phase of the Accounting Section's work has been in the field of Office Management. The studies of the Office Management group each year have been directly concerned with the office and clerical personnel. However, the principles and general practices which it has outlined are applicable in many instances to company organization as a whole, and have proved valuable to other sections and departments.

In addition to problems of employment, selection and training of office personnel, the Office Management Committee studies and reports on form design and standardization. This committee has issued authoritative reports on such subjects as: regulating employment, wage incentives, eliminating clerical waste, commercial correspondence, centralized filing control, standardization of forms and printing.

Foremost among the activities of the Accounting Section for a number of years has been the work of the Committee on Uniform Classification of Accounts. This committee has encouraged national uniformity in accounting and cooperated in the consideration and development of the National Classification of Accounts, both manufactured and natural.

At present, the committee is engaged in a study of the new classification adopted by the National Association of Railway and Utilities Commissioners for both manufactured and natural gas companies. The present study is an attempt to review the entire proposed classification in the light of its practical application by both manufactured and natural gas companies. These reports, when approved, will be made available to the Committee on Statistics and Accounts of the NARUC.

Statistics Need Pointed Out

The Accounting Section was first to see the need for an organization to gather national statistics on the gas industry. Through its Advisory Committee on A. G. A. Statistics, it initiated the organization and development of the Association's Statistical Department. This department has become such a valuable adjunct to Association activities and performs such an important function in the gas industry, that a separate article in this series will be devoted to its work.

An early achievement credited to the Accounting Section was the result of the work of the Insurance Committee. Through the compilation of statistics showing the low ratio of actual losses to premiums paid by gas companies, the committee was able to induce the insurance rating bureaus to adopt a new schedule of rating gas plants, thus effecting a reduction of 25 per cent in the amount of insurance premiums paid.

The balanced program and highly organized character of the section's work is brought out in the report of the Compendium Committee which contains a bibliography of all its activities. This report evaluates the progress made in the study of each subject and includes an opinion as to further work that might be undertaken under present conditions. It offers eloquent testimony to the great amount of work accomplished since the organization of the Accounting Section.

An innovation in this year's plan of activities has been the inauguration of enlarged committee conferences to which not only committee members are invited but also representatives of member gas companies. In addition to the General Accounting Committee conferences, previously mentioned, three other conferences will be held by the following committees: Office Management, Customer Relations and Customer Accounting.

Luncheon Conferences sponsored by the various committees of the section have become a most important part of the section's annual meetings.

That the section, through its committees, has functioned with success and has given the gas fraternity assistance in its many accounting and office management problems, is borne out by the splendid growth in its membership and increasing attendance at the annual convention. There were 15 members present at the organization meeting in 1918. Today the section has approximately 800 members, including the outstanding men in that field. The best accountants in the industry have given most liberally of their time and knowledge in the furtherance of its endeavors.

The Objective Rate Plan

Review of Book, "The Objective Rate Plan," by William F. Kennedy Published by the Columbia University Press

OF all the gadgets in the kit of the public utility ratemaker, the one which has attracted the most attention recently has been the so-called "Objective Rate." Much has been written with this as a subject. Probably the latest is "The Objective Rate Plan" by William F. Kennedy. This work was originally a Master of Arts thesis but the volume which is just off the press constitutes the original thesis revised to September, 1936. Essentially the volume is a review and analysis of the results of the application of the objective rate plans of the Alabama Power Company, the Georgia Power Company and the Tennessee Electric Power Company, all subsidiaries of the Commonwealth and Southern Corporation.

In this volume the author confines himself to an analysis of the plan as initiated by the three companies above mentioned, due, he says, to the lack of information regarding the procedure of other companies and the short time during which their plans have been in effect. The volume contains, however, tables showing the names of a number of companies which have adopted objective rates together with certain information as to the detail of the plans adopted by them.

The basic thought of the objective rate plan is not new. The idea in a somewhat simpler form was embodied in the gas rate schedule of the Consolidated Gas, Electric Light and Power Company of Baltimore in 1916. From that time to the initiation in 1933 of a rate plan by the Alabama Power Company formally known as the "Objective Rate," this device attracted little attention in the utility field. During the years since 1933, numerous embellishments of the original plan have been devised, most of them to effect some result not contemplated by the original plan or to cure some defect which experience with the original plan has demonstrated. Several of these later developments, though quite interesting, are not touched upon by the author.

Most of us know by this time what the objective rate plan comprehends. In its simplest form it is merely the institution of a rate much lower than the one in effect (sometimes termed the "inducement" rate) toward which the company expects to work as an "objective" for its future permanent rate. Additional service necessary to bridge the gap between the charge on the present rate and that on the objective rate is either given free or at a very low price. The purpose is to secure the transition from a given rate level to one much lower without the serious shock to revenues which would be produced by an immediate reduction in rates to the objective level.

In the original Commonwealth and Southern plans there was coupled with the objective an "immediate" reduction in rates of comparatively small amount. It cannot be considered that the so-called "immediate rate" is an integral or necessary part of the plan although in these instances, an immediate rate was a part of the plan instituted.

Mr. Kennedy's book traces the progress of these three original objective rate plans instituted in Alabama, Georgia and Tennessee from their inception in the latter part of 1933 and the first of 1934 down to about the middle of the year 1936, at which time the Alabama Company had completed its first objective rate cycle and adopted a second, and both the Georgia and Tennessee companies' plans were two years old. Originally these companies proposed these plans on the basis of a three-year cycle. A reduction in the immediate rate was to be made at the end of each of the first two years and at the end of the third year the objective rate was to go into effect as a substitute for the last immediate rate. In the Alabama case the full three-year cycle was not carried out.

The volume is especially interesting from a statistical viewpoint as showing what was actually accomplished under various conditions in these three localities. It is by no means conclusive that the results attained could be duplicated elsewhere by similar moves. In fact, it is stated by the author that certain more conventional means of securing lower rates adopted in other places actually appeared to show greater results in a given time than did the objective rate plan. He is quick to point out, however, that local conditions were not the same so that these results cannot be directly compared. Unfortunately, this probably always will be true.

The author points out that coupled with the institution of these plans went intensive and greatly augmented sales efforts. It never will be possible to separate the results of these sales efforts from the results of the objective rate itself nor to disprove the opinion of many utility men that had the same sales effort been placed behind the conventional type of rate the results would have been at least as good.

However, in spite of all the handicaps of complication, allegations of discrimination and various other objections, the use of the objective rate plan continues to spread so that it undoubtedly will play a large and important part in rate making for several years to come. Mr. Kennedy's work is merely a start in the analysis and evaluation of this device and it is to be hoped that as more data become available his work will be carried on to the ultimate great benefit of the utility industry.

Reviewed by Donald A. Henry, Member, A. G. A. Rate Structure Committee, and Chairman, Subcommittee on Special Rate Plans.

The Psychological Factor

"The gas industry has really got to study the psychological aspect of selling, which always overrides the technical aspect. The engineer or scientist may argue until he is black in the face, but he will not shake the conviction of the public that it is this or that, that is wanted. The public works on what the Americans call hunches; more often than not they are against the facts; but it is undertaking something to set out to reform the public in that respect. The gas industry is well equipped to deal with scientific and engineering problems; and as a consequence not able to deal with that quantity which is so difficult to assess —the psychological factor."

—"Janus," "The Gas Times," London, March 27.

A. G. A. Gas Statistics Are Widely Used

The following newspaper clippings are reprinted here as an indication of the effective use made by various local companies of the Association's statistical releases.—Editor.

HARTFORD, CONN., COURANT
April 2, 1937

Record Set by Industry in Gas Use

Sales to Manufacturing and Commercial Customers in State at All Time High in '36

Progress in the utilization of gas heat by Connecticut's industries and by its commercial establishments is shown in the annual statistics on the use of gas in the State, compiled by the American Gas Association from the monthly reports submitted to it by 11 Connecticut public utilities whose sales constitute 92 per cent of the total sales of manufactured gas in the State.

Out of a total of 16,180 industrial and commercial gas customers in Connecticut, these 11 companies serve 13,901 establishments which during the year 1936 used a total of 2,293,046,000 cubic feet of manufactured gas. This was the largest sale of gas for these purposes ever recorded in Connecticut. Not since 1931, when the previous all-time high mark for industrial and commercial gas sales was recorded, has this total surpassed the figure of 2,000,000,000 cubic feet.

The amount of gas employed by the 13,901 customers last year represented a gain over the industrial and commercial sales for 1935 of 15.4 per cent. At the same time, the number of such customers increased by exactly 100 over the figure for the preceding year, this being a gain of less than one percent. Thus, the sharp rise in the use of gas heat was made by practically the same number of customers, a fact which indicates an extraordinary expansion in the utilization of gas by the individual manufacturing plant, hotel, restaurant, etc. Gas heat is now employed in a large percentage of Connecticut's many factories in which metal is worked, since it can be easily controlled, and maintains a constant and accurate temperature, both of which are of great importance in the manufacture of high-grade metal products.

Increasing use of gas in Connecticut industry and in the commercial establishments is due not so much to the revival of industry in the past year as to an incessant campaign of research into new and improved uses for gas in manufacturing processes and in large-scale cooking operations, executives of the gas industry hold. This research program was begun about 12 years ago and it has resulted in the discovery of thousands of new uses for gas and in a wide improvement in former methods of applying gas heat. The program was participated in by gas companies throughout the country and its benefits have been nation-wide. Connecticut, however, has apparently taken advantage of new developments more rapidly than its neighboring states, for last year's increase in the employment of gas in this State exceeded the general New England gain of 8.3 per cent as well as the gains in use of manufactured gas for related purposes in New York, New Jersey and Pennsylvania.

LOS ANGELES, CAL., EXAMINER
March 30, 1937

Cold January Boosts Coast Sales of Gas

Consumption Rises 8.8 Per Cent over 1936 Month; Big Increase in Domestic Use

That "unusually cold" month of January sent domestic sales of gas soaring some 41.6 per cent along the Pacific Coast over the 1936 figures.

The full extent in the January increase in sales became known today with completion of the American Gas Association's first monthly survey of Pacific Gas Company sales.

Aggregate sales of gas went up 8.8 per cent over a year ago for the states of California, Arizona, Nevada, Oregon and Washington.

While domestic sales, including house-heating, made the spectacular rise, there was a decrease of 71 per cent in sales for electric generation.

Sales by Classes

Statistics collected by Paul Ryan, chief statistician of the association, showed total sales of 19,451,815,000 cubic feet compared with 17,885,667,000 in January, 1936; domestic sales were 11,006,442,000 cubic feet against 7,773,801,000; industrial and commercial 7,729,804,000 against 7,700,525,000; miscellaneous 27,273,000 against 18,011,000 and electric generation 688,296,000 against 2,393,330,000.

The electric generation in California and some industrial services are supplied on a basis of prior service to householders, consequently they decline at periods of peak demand when household consumption takes a large portion of the available supply.

Coast Revenues Rise

Coast revenues from the sales were up 15.7 per cent from a year ago, largely because of the greater sales in the higher-cost brackets of householders' use. Revenues from domestic sales went up 22.6 per cent, failing to keep pace with the expansion of volume because of rate reductions between February, 1936, and February, 1937.

California's total sales were up 7.9 per cent in volume and 15.7 per cent in revenues.

The state's volume was 18,494,748,000 cubic feet, and revenues $9,566,975.

PORTLAND, ORE., OREGONIAN
March 30, 1937

Gas Sales in Oregon

BY LEON B. BAKETEL
Financial Editor, The Oregonian

In cold weather people have to keep warm, and those who use gas to heat their homes, as well as for other purposes, are no exception to the rule. But what may be astonishing to the public generally is to learn that during January, which was a cold, bitter month, with the temperature around freezing or below much of the time. Oregonians used more gas than did the several times larger state of Washington.

Figures released by Paul Ryan, chief statistician for the American Gas Association, show that domestic sales of gas soared some 41.6 per cent along the coast over 1936 figures. Aggregate sales went up 8.8 per cent over a year ago for the states of Oregon, Washington, California, Arizona and Nevada. In addition, he pointed out that while domestic sales, including house heating, made the spectacular rise, there was a decrease of 71 per cent in sales for electric generation.

Oregon, in January, had sales of 385,384,000 cubic feet, up 21.7 per cent from the 1936 month. Revenues of $273,529 were up 10.6 per cent.

Washington gas company revenues were almost exactly the same as those of Oregon, the total being $273,528, and up 12.6 per cent. Volume sold was 307,266,000 cubic feet, up 24.7 per cent from last year. House heating sales were segregated and showed a gain of 42.4 per cent.

Total sales for the coast of 19,451,815,000 cubic feet compared with 17,885,667,000 in January, 1936. Domestic sales were 11,006,442,000 cubic feet, against 7,773,801,000; industrial and commercial 7,729,804,000, against 7,700,525,000; miscellaneous 27,273,000, against 18,001,000, and electric generation 688,296,000 against 2,393,330,000.

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Personal and Otherwise

Brooklyn Union Elects Accounting Executives

THOMAS P. PAYNE, veteran employee and auditor of The Brooklyn Union Gas Co. for more than 16 years, has been elected treasurer by the board of directors. Mr. Payne succeeds the late Herbert Wellington.

At the same meeting Assistant Auditor Charles J. Fue was elected auditor. Assistant Auditor Glen E. Foster was elected comptroller. This latter post is a new office in the company.

Mr. Payne has worked in the gas company during all his business life. His first position was with Metropolitan Gas Light Co. in 1895, just a few months before it became part of The Brooklyn Union system.

Mr. Fue, the new auditor, joined the company in 1927, being elected assistant auditor. Previously he had been associated with the Midland United Co. for three years and prior to that had been engaged in the public accounting field.

Mr. Foster, who had been elected to the new office of comptroller, joined the company as an assistant auditor in April, 1933. Previously he had been associated for 11 years with the accounting firm of Arthur Henderson & Co.

Letter from a Pioneer

OLD timers in the gas industry will recall the Sun Dial gas ranges manufactured many years ago by W. W. Goodwin & Company. A recent letter addressed to the Association by W. W. Goodwin, Jr., son of the pioneer manufacturer, gives the following interesting historical information:

"My father was the first man to manufacture gas stoves in this country, both for cooking and heating. Only a short time ago I disposed of our cooking range which we had used for over 50 years—of course it was not as 'up-to-date' as those made today, but it did the work until it really fell apart.

"Perhaps some of your Association can recall the 'Sun Dial' gas stoves, made by W. W. Goodwin & Co., 1012-1018 Filbert St., Philadelphia, Pa., with branches in New York City, Baltimore, Chicago and San Francisco, Calif. He also made gas meters and special gas appliances. Until recently all nickles minted by the U. S. mint were dried in one of our stores.

"My father died in 1901, but I feel his name and work still live in the gas industry. The old Holland House in New York was equipped with our ranges and in the Auditorium in Chicago we installed over $35,000 in cooking outfits so you can see the writer is acquainted with gas ranges, etc., having been taken through the entire business until absorbed by the American Meter Co. of N. Y.

"I have in my possession an old style gas heater which was on exhibition at the Centennial in Philadelphia in 1876. It is in good condition. If it would be of any interest to you to show the improvements of today, I will gladly give it to you or any one interested.

"Pardon the time I have taken in your reading this, but it will prove that after 60 years, Gas Cooking cannot be displaced."

New Laclede Directors

SIX new members were appointed to the Board of Directors of The Laclede Gas Light Company, St. Louis, Mo., in addition to five members who were re-elected at a stockholders' meeting April 2. Those elected, none of whom was a member of the old Board, are: L. Wade Childress, president, Columbia Terminals Co.; A. Wessel Shapleigh, secretary and treasurer, Shapleigh Hardware Co.; W. C. D'Arcy, president, D'Arcy Advertising Co.; E. E. Pershall, president, T. J. Moss Tie Co.; John Duncan, president, Litchfield & Madison Railway Co.; and Ben F. Pickard, who was named operating executive of Laclede Gas after E. P. Gosling, former president, resigned last December.

Other members of the Board, who served on the former body and were re-elected are: Phillips B. Shaw of Toledo, Ohio; M. E. Feiwell of Chicago; Archibald L. Jackson of New York, and R. R. Monroe and Walter A. Horner, who are executive vice-president and secretary respectively of Utilities Power & Light.

Australian Visitors

WILLIAM QUEALE, managing director, Kelvinator, Australia, Ltd., Adelaide and Sydney, was a visitor to A. G. A. headquarters April 6. Mr. Queale, who is interested in gas refrigeration and air conditioning, is on a two or three months' business tour of the United States.

Another recent Australian visitor was Stanley McGregor-Reid, director, South Australia Gas Company, Adelaide, who, accompanied by his wife, stopped in New York en route to London. Mr. and Mrs. Reid made a brief tour of our principal cities on their way from the Pacific to the Atlantic Coast. While in New York, Mr. Reid was nominated as an honorary member of The Engineers' Club by Alexander Forward, managing director of the Association.

Both visitors were introduced to the Association through Gerald M. O'Dea, general manager and secretary, South Australian Gas Company, who is an A. G. A. member.

Francis Engel Honored for Service Record

ON April 13, the sixty-fifth anniversary of his association with the Elizabethtown Consolidated Gas Company, Elizabeth, N. J., Francis Engel, vice-president and general superintendent, was honored at a dinner given by his fellow workers. Speakers at the dinner who paid tribute to Mr. Engel's long and distinguished service included Mayor Joseph A. Brophy, Hamilton F. Kean, Henry Kreh, Jr., president of the Chamber of Commerce, and John Kean.

Thirty-three other employees with service records of 25 years and over were also honored at the dinner. Next in point of service to Mr. Engel was C. C. Denton with 47 years, followed by John Manhardt, 43, Robert Burns, 42, and H. W. Crane, 40.

Gas Range in Use 60 Years Found

MRS. LIZZIE LEMMON of Kansas City is the winner of a new modern gas range given by the Kansas City Gas Company as first prize in an Old Range Contest. Mrs. Lemmon's gas range, 60 years old, was the oldest registered. It was purchased in 1877 the year Rutherford B. Hayes was inaugurated president of the United States. The make of the range is "Sunflower" and was purchased in Olathe, Kansas.

In the sixty years the range has been in continuous service, Mrs. Lemmon spent only $5.00 as the entire cost of repairs. The range had a broiler located over the four top burners and underneath the burners was a large oven.

When interviewed Mrs. Lemmon stated the range had given such satisfactory service and is still giving such good baking and cooking results that she had hesitated to purchase a modern gas range. She says in all of the years she has used the range she has always obtained perfect baking results.

T. Aoki Promoted

MEMBERS of the Association who had the pleasure of meeting Tetsuji Aoki, then superintendent of the Shinkyo Works of the South Manchuria Gas Co., will be interested in learning that Mr. Aoki, a member of the Association, has returned safely to Manchuria from his world tour of the gas industry whereupon he was appointed superintendent of the Dairen gas works. Mr. Aoki has extended a cordial invitation to all Americans visiting Manchuria to call upon him at Dairen.

Some Gas Lamps Still Left in New York

THAT sophisticated New Yorkers are also sentimental is perhaps shown by the fact that three gas street lamps are still retained to please the residents of the neighborhood. Two are in Macdougal Alley and one is in Patchin Place. Gas street lighting in New York passed out altogether for practical purposes not so long ago as one, blinded by the glare of electric illumination today, might suppose. Little gas street lighting was left by about 1915, but it persisted until 1918.

It was only about two years ago that gas street lighting was finally entirely done away with in Washington, D. C. In September, 1934, Chicago still had 4,897 gas lamps and 575 gasoline lamps, necessitating the employment of a score of lamplighters. The old gas lamps die hard, it seems.

Old-timers, of course, remember seeing the lamplighters making their rounds. The gas lamps in Chicago were equipped with pilot lights and controlled by an automatic time switch, at least, in their later days. But in the good old days before such modern gadgets came along, gas lamps were lighted by hand. Soon after the installation of gas lights in New York a torch for lighting them was invented. This consisted of a broom handle to the end of which was fastened a small oil container with wick and shade. The shade was either of copper or tin and was perforated. The man or boy whose job it was to light the lamps also cleaned them. Each lamplighter was supposed to care for about 100 lamps.

A street lighting calendar, showing the hours at which the lamps should be turned on and off, was maintained by the city. The hours of lighting and turning off the lamps varied according to the season of the year. The lamplighters were required to carry a copy of this calendar and to conform to it. Calendars also were posted in gas plants and governor houses.

—*New York Sun*,
March 20, 1937

Servel Sponsors "March of Time" Program

SPONSORSHIP of the "March of Time," now being broadcast over the CBS network by Servel, Inc., manufacturer of the Servel Electrolux gas-operated refrigerator, ties in with the Spring and Summer refrigerator selling campaigns conducted by the gas utilities in all parts of the country. The broadcast began April 15 to continue for thirteen weeks.

Use of radio to carry the message of Servel Electrolux to thousands of people on the gas lines who may be in the market for a new refrigerator is part of the extensive advertising campaign carried on by Servel, Inc., in magazines, trade papers and daily newspapers. Special attention will be given to emphasizing the backing of Servel Electrolux by the American gas industry in the commercial portion of the broadcast.

The "March of Time," now in its seventh year, is regarded as one of the most popular programs on the air, having stood highest in several annual polls conducted by radio editors throughout the country. Other local and national polls have given a high place to the broadcast because of its entertaining and educational character.

As hosts of radio listeners know, the "March of Time" is a dramatic representation of leading news events that have been in the public eye a short time before the broadcast is given. The program will be broadcast over forty-five stations every Thursday evening, the hours being 10:30 Eastern Standard Time; 9:30 Central; 8:30 Mountain, and 7:30 Pacific.

Stanley Taber Dies

STANLEY TABER, 42, assistant general manager in charge of sales for the Iowa-Nebraska Light and Power Company in Lincoln for the past twelve years, died March 10 in Lincoln. Mr. Taber had been identified with utilities since 1914.

On May 19, 1925, he had been transferred to a group of properties which later became the Iowa-Nebraska Light and Power Company. In a short time he was advanced to assistant general manager in charge of sales, which position he held until his death. As an outstanding utility merchandise man, Mr. Taber had numerous pioneering activities accredited to him. He was a member of the American Gas Association.

Trotman at Connersville

J. B. TROTMAN, who for many years was associated with Goulds Pumps, Inc. and is widely known in the pump field, is now located at Connersville, Ind., as manager of the "T" pump division of Roots-Connersville Blower Corp.

Record Reprints of Gas Range Article

FURTHER evidence of the increasing interest in gas promotional activities resulting from the national advertising campaign was provided recently by *McCall's* magazine. On March 24, this publication announced that the gas industry had ordered the largest number of reprints of the article, "I'm Proud as Punch of My New Gas Range," from the March issue, of any appliance article ever run in *McCall's* magazine. Orders for 85,710 reprints had been received at that time. Another record was broken when utility companies ordered 221 mats for use in local newspapers, the largest number ever ordered of an appliance feature.

Consolidated Executive Dies

CLIFFORD STANLEY FOX, an executive of the Consolidated Edison Company of New York who served the firm for nearly 40 years, died April 19 at his home, 143-37 Beech Avenue, Flushing, Queens, after a brief illness. He was sixty-two years old.

Mr. Fox was born at Philadelphia on August 2, 1874, the son of Mr. and Mrs. Charles Fox. He was educated at the Episcopal Academy in Philadelphia and the University of Pennsylvania. Mr. Fox came to New York in 1899 and went to work with the East River Gas Company, of Long Island City, an affiliate of the Consolidated System. He received successive promotions and became vice-president of the company in 1928. After the merger of the Consolidated and its subsidiaries last December Mr. Fox had charge of gas distribution throughout Queens.

Mr. Fox had lived in Flushing since 1912 and was a member of the American Gas Association, the Queens Chamber of Commerce and several civic and engineering societies. Surviving are his wife, Mrs. Ritchie Bennett Fox, a daughter, Mrs. E. T. Farrish, and a son, C. Stanley Fox Jr.

R. D. Wells Is Dead

RUSSELL D. WELLS, president of the Floyd-Wells Company, Royersford, Pa., manufacturers of gas ranges, died in Philadelphia on April 7. Mr. Wells had been president of the company for several years. In that capacity he had been active in many cooperative activities of the industry, including the American Gas Association.

Mr. Wells was born in Spring City, Pa., in 1887. In 1910 he graduated from the Massachusetts Institute of Technology with the degrees of Mechanical Engineer and Electrical Engineer. He was a member of the Board of Trustees of the Institute of Cooking and Heating Appliance Manufacturers since its organization in 1933 and served as a member of the Executive Council which prepared a Code of Fair Competition for the industry.

He is survived by his father, I. Irwin Wells, who is still active in the management of the company, his wife, Mrs. Clarice Wells, and three children, David A., Mary and Barbara.

A Home Service Visitor

MRS. EILEEN MURPHY, home service director of the British Commercial Gas Association in London, arrived April 19 on the *Queen Mary* for a six weeks' visit in the United States. Mrs. Murphy, during that time, will visit a number of gas companies through the East and Middle West, getting a comprehensive picture of home service work in this country.

Affiliated Association Activities

Pacific Coast Gas Association

J. S. Spaulding

THE Pacific Coast Gas Association has just completed two highly successful Spring Conferences, one of its Technical Section on March 18 and 19 and the second of its Sales and Advertising Section on April 1 and 2. About two hundred attended each conference representing the gas companies and manufacturers of the Pacific Coast states.

The Technical Conference was in charge of Otto Goldkamp of the San Diego Consolidated Gas and Electric Company, this year's Chairman of the Technical Section of the Association. An unique feature of the conference was its division into round table meetings each being in charge of a committee chairman. It was found that this type of meeting was extremely satisfactory in that it promoted more thorough and interesting discussion of the various papers and reports submitted. These totaled 16 and in addition many other topics were brought up for preliminary study.

Luncheon Meetings

Two luncheon meetings were held in connection with the conference. At one of these F. O. Suffron, supervisor of the A. G. A. Testing Laboratory, at Los Angeles, addressed the gathering on the subject of the domestic appliance research being conducted by the American Gas Association.

Other leaders in the Pacific Coast technical work who took an active part in the conference are: A. B. Allyne, Southern Counties Gas Company, vice-chairman, Technical Section, and chairman, Transmission Committee; Frank Pape, Pacific Gas and Electric Company, chairman, Distribution Committee; Guy Corfield, Los Angeles Gas and Electric Corporation, chairman, Utilization Committee; and John Keillor, British Columbia Electric Railway Company, chairman, Production Committee.

The presiding officer at the Sales and Advertising Conference was B. W. Reynolds, Pacific Gas and Electric Company, chairman of the Section. Mr. Reynolds was assisted by J. S. Spaulding, Los Angeles Gas and Electric Corporation, chairman, Advertising Committee; N. O. Fratt, Seattle Gas Company, chairman, Domestic Sales Committee; Gladys Price, Southern California Gas Company, chairman, Home Service Committee; and R. T. Stephens, Pacific Gas and Electric Company, chairman, Industrial Sales Committee.

A portion of this conference also was devoted to round table meetings of the various committees, and this type of meeting was equally successful with the sales group. Features of the program included an exposition of the national advertising by Mr. Spaulding who is also a member of the national committee, and a comprehensive display and demonstration of counter-type commercial cooking appliances arranged by George Heckler of the Southern California Gas Company.

One of the luncheon meetings was the occasion of the presentation of the Association's Addison B. Day Medal of Honor to John H. Grayson, formerly president of Grayson Heat Control, Ltd. This medal was awarded to Mr. Grayson for his invention and marketing of several control devices for gas appliances, some of which revolutionized appliance design. The presentation was made personally by Addison B. Day, president of the Los Angeles Gas and Electric Corporation and donor of the medal.

After a Board of Directors meeting held in conjunction with the Sales Conference, President Jas. F. Pollard announced that Seattle, Washington, had been chosen as the place for the 1937 Convention of the Association. This convention will probably be held late in August.

Convention Calendar

MAY

4-5-6 Pennsylvania Gas Association
Lodge of the Sky Top Club, Sky Top, Pa.

10-14 National Fire Protection Association
Congress Hotel, Chicago, Ill.

10-15 Natural Gas Department, A. G. A.—Annual Convention and A. G. A. E. M. Exhibition
Municipal Auditorium, Kansas City, Mo.

May 20 New England Gas Association—Operating Division
Hotel Bancroft, Worcester, Mass.

24-26 A. G. A. Production and Chemical Conference
Hotel New Yorker, New York, N. Y.

24-27 National Association of Purchasing Agents
William Penn Hotel, Pittsburgh, Pa.

28-29 A. G. A. Executive Conference
Palmer House, Chicago, Ill.

JUNE

1-3 American Petroleum Institute
Broadmoor Hotel, Colorado Springs, Colo.

1-4 Edison Electric Institute
Chicago, Ill.

7-9 National Office Management Association
Chicago, Ill.

8-9 A. G. A. National Conference on Industrial Gas Sales
Palmer House, Chicago, Ill.

10-11 Canadian Gas Association
Chateau Laurier Hotel, Ottawa, Canada

10-11 New York-New Jersey Regional Gas Sales Conference
Westchester Country Club, Rye, N. Y.

11-16 International Gas Union
Paris, France

14-20 Second World Petroleum Congress
Paris, France

15-19 Home Service Training Course, A. G. A. Testing Laboratory
Cleveland, Ohio

20-23 Public Utilities Advertising Association
Hotel Pennsylvania, New York, N. Y.

21-24 American Home Economics Association
Kansas City, Mo.

24-26 American Society of Heating and Ventilating Engineers
New Ocean House, Swampscott, Mass.

June 28-July 2 American Society for Testing Materials
Waldorf Astoria Hotel, New York, N. Y.

JULY

1-3 Michigan Gas Association
Grand Hotel, Mackinac Island, Mich.

AUGUST

Pacific Coast Gas Association
Seattle, Wash.

Aug. 31-Sept. 3 National Association of Railroad and Utilities Commissioners
Salt Lake City, Utah

SEPTEMBER

6-10 American Chemical Society
Rochester, N. Y.

19-23 American Transit Association
The Greenbrier Hotel, White Sulphur Springs, W. Va.

Wk. 27 AMERICAN GAS ASSOCIATION
Cleveland, Ohio

OCTOBER

11-15 National Safety Council
Kansas City, Mo.

18-21 American Society for Metals
Atlantic City, N. J.

18-23 American Dietetic Association
John Marshall Hotel, Richmond, Va.

NOVEMBER

9-12 American Petroleum Institute
Stevens Hotel, Chicago, Ill.

New Jersey Gas Association

J. P. Leinroth

THE twenty-sixth annual convention of the New Jersey Gas Association held at the Berkeley-Carteret, Asbury Park, N. J., March 23, was attended by more than 900 members and guests of the association. An excellent program which revolved around the theme, "Increasing Domestic Gas Sales," was presented under the direction of W. S. Potter, president. Alexander Forward, managing director of the American Gas Association, was among the speakers.

J. Paul Leinroth, Public Service Electric and Gas Co., was elected president of the association for the new year. Other officers elected at the meeting were: B. A. Seiple, Jersey Central Power and Light Co., first vice-president; George B. Webber, Public Service Electric and Gas Co., second vice-president; and Harry A. Sutton, Public Service Electric and Gas Co., secretary-treasurer.

A feature of the meeting was the award of prizes for the best papers on "How I Can Help My Department Contribute Most to My Company in 1937." Prize winners were: E. R. Eberle, first; John C. Klemn, second; E. A. Lawler, third; A. H. Kline, fourth; John McDonnell, fifth; and John L. Wood, sixth.

A banquet and attractive entertainment were held in the evening.

N. Y. Association Appoints G. H. Smith Secretary

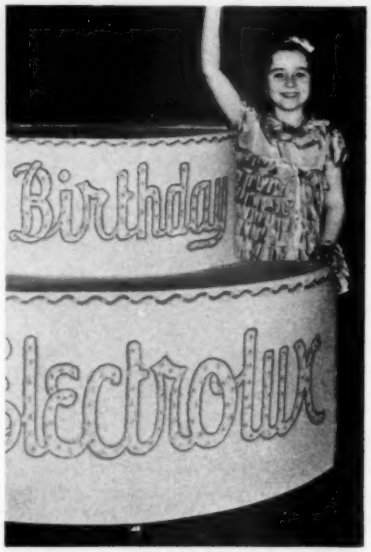
G. H. Smith

BY recent action of the Executive Committee of the Empire State Gas and Electric Association, George H. Smith was appointed secretary. Mr. Smith has been acting secretary for a brief period replacing C. H. B. Chapin who has retired from the Association's activities.

Mr. Smith is a graduate of New York University with a degree of B.S. in 1911 and C.E. in 1913.

For fifteen years he was associated with the Central Hudson Gas and Electric Corporation in various capacities which led up to chief gas engineer and assistant electrical engineer. While with the Central Hudson Company he was credited with much original research work with bituminous generator fuel for gas making and wrote various technical articles upon it. He engineered and supervised the laying of a gas main across the Hudson River at Newburgh.

Mr. Smith has been associated with the Empire State Gas and Electric Association for the past ten years acting as its gas and electrical engineer. He has been an outstanding figure in the rural electrification program in the state. He has coordinated the activities of various committees of the Association in the Commercial, Accounting and Operating Sections and has represented the Association in most of its joint activities with other associations and groups.



The tiny tap dancer and singer standing beside the big cake is "Baby" Clare Kelleher who lives in Malden. She was one of the entertainers at the banquet of the New England Gas Association meeting held April 2 in Boston at the Hotel Statler. Four hundred gas company executives, sales managers and salesmen from all parts of New England attended the meeting to launch a gas refrigerator selling campaign. The meeting took the form of a "Big Birthday Party" to celebrate the tenth anniversary of gas refrigeration. One of the pleasant surprises of the evening was the entrance of "Baby" Clare who jumped out of a big birthday cake to greet the audience

Cyrus Barnes, New England Power Association, chairman of the Sales Division, was in charge of the meeting

The New England Gas Association

AT their last meeting, the directors of the New England Gas Association voted to hold the next annual meeting on Thursday, February 24, and Friday, February 25, 1938, at the Hotel Statler, Boston. It is planned to have the same sessions as this year—business sessions on Thurday and Friday, a dinner and dance on Thurday evening and a Home Service luncheon Friday noon.

Canadian Gas Association

THE forthcoming 30th annual convention of the Canadian Gas Association, Ottawa, Canada, June 10 and 11 next, promises to be not a whit behind many of that organization's past meetings.

A review of the papers already promised for this meeting show a leaning towards sales development, and while the technical side has not been overlooked, there has been a feeling that more attention should at this particular time be given over to ways and means of selling gas.

A welcome is promised to all American gas men, whether members of the Association or not. All reservations should be sent direct to the manager of the Chateau Laurier Hotel, Ottawa, Canada, as soon as possible, and notification given the secretary, G. W. Allen, that reservations have been made direct. New address of the Canadian Gas Association is 7 Astley Avenue, Toronto 5, Ontario.

McCarter Medals

LOUIS N. MASTRIANO, an employee of the Customers' Service Department of the Consolidated Edison Company of New York, was recently awarded a McCarter medal and certificate for having performed an outstanding act of life saving by the use of the Schafer prone pressure method of resuscitation. Presentation of the medal and certificate was made on March 30 by A. E. Turner, general superintendent of the Customers' Service Department. Mr. Mastriano was complimented by officials of the company for his prompt and effective action.

The act for which Mr. Mastriano was so singularly honored occurred on October 31, 1936. At that time Mr. Mastriano was visiting his parents in The Bronx, N. Y., when a person in an adjoining apartment was overcome by gas.

William McKinley Keephart, a fitter in the Gas Distribution Department of the Public Service Electric and Gas Co. at Trenton, was presented a McCarter medal, March 24, in recognition of his having revived by the prone pressure method of resuscitation a person overcome by gas. The presentation was made by James H. Galt, engineer of gas distribution, Southern Division, in the presence of fellow-workers of Mr. Keephart, at 365 South Warren Street, Trenton. Mr. Galt and John M. Orts, director of safety education, Public Service, who also attended the presentation, commended Mr. Keephart on his timely work.

The resuscitation for which the award was made took place December 15, 1936, in Trenton.

The awards are made possible through the generosity of Thomas N. McCarter, president, Public Service Electric and Gas Co., Newark, N. J.

Accounting Section

Design and Transfer of Meter Reading Route Sheets

W. H. Goforth

By W. H. GOFORTH

The Philadelphia Gas Works Company

AT the beginning of The Philadelphia Gas Works Company centralization plan, it was necessary to make radical changes covering Gas Accounting theory and practice as well as change of all forms entering into or becoming a part of Gas Accounting set-up. We realized the necessity of having records and forms that should show concise and quick information covering a customer's account. The vital control of centralization is rapidity of supplying quick, correct and sufficient information to a district office, or other point of contact, when a customer inquires regarding his respective account.

Route Sheets Re-designed

Meter route sheets play an increasingly important part in a modern utility accounting system, and we realized that form used prior to centralization would be a detriment to supplying quick information. The sheet was re-designed in order to allocate information, comments, etc., covering customers' accounts in such groups as would tend to make this information readily available.

The front of meter reading route sheet was rearranged, some columns eliminated, and other columns added.

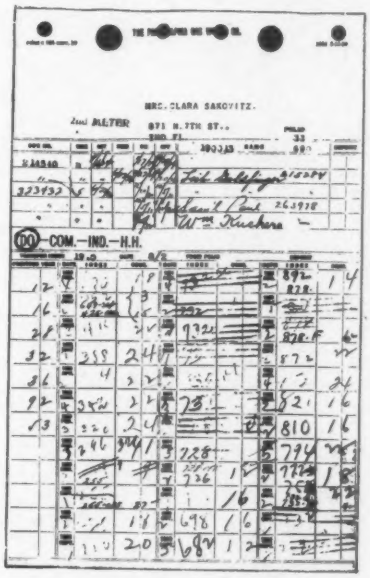
All notations which would apply to only one customer are prefixed with number 1, 2, 3 or 4. All changes, remarks, reports, etc., are submitted by Meter Reading Division on a separate sheet of paper and attached to proper meter reading route sheet, for entry by Extending Clerks.

There has been printed a column headed "Appliances," which is divided into five sub-columns as follows: First column contains the code letters representing various gas appliances. Other columns headed 1, 2, 3 and 4, correspond with space provided for entry of customer's name in the upper right hand corner of the sheet, and which are also identified as 1, 2, 3 and 4.

Below is an explanation of code letters as listed:

G.R. Gas Range
A.W.H. Automatic Water Heater
W.H. Circulating Water Heater
RFG. Gas Refrigerator

H.H. Gas House Heater
C. Bur. Combustion Burner in House Heater
C.RD. Clow Radiators
M.A. Miscellaneous Appliances, such as Radiators other than Clow Gas Steam, Incinerators, and Radiant Fire Heaters, etc.



Front of meter reading route sheet prior to centralization

If the first customer uses Gas Ranges, Circulating Water Heater, a check mark is "placed in first column opposite "G.R.," "W. H." If the first customer moves out and second customer occupies house and uses Gas Range, Automatic Water Heater and Gas Refrigerator, check marks are placed in second column opposite "G.R.," "A.W.H." and "RFG."

All future orders that are turned in by Customers' Service Representatives covering "Set" or "Turn-on" orders, are scrutinized covering appliances listed on reverse side of order and noted on meter reading route sheet in proper columns covering customer's account. By this procedure, the connected load of all individual customers is systematically and correctly accumulated. This information is of material benefit, in the future, in determining the status of customer's consumption when entry, covering month's consumption, is made by Extending Clerk—Billing Section, or Review Clerk, when reviewing ledgers.

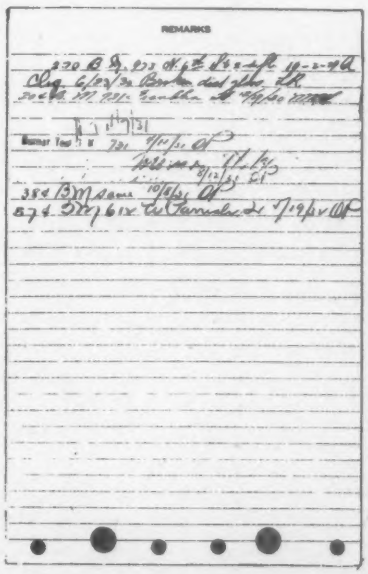
Classification Code Number is inserted in space provided: lower right hand corner—"Class. Code No."—which indicates customer's type of business under our Sales classifications.

The reverse side of meter reading route sheet has been arranged and space provided for entry of different classes of orders such as House Tests, High Bills, Scrap, Change and Remove Orders, Moving Addresses, Journal Entries, etc.

We find the "moving address" space is very beneficial as a future reference regarding an account. Vertically, you will find on every other line the numbers 1, 2, 3 and 4. These numbers correspond with the numbers on the front of route sheet and indicate the different customers.

Customer (Number 1) on the front of sheet (Andrew Jordan) moved from 1526 Ritner Street to 1425 Wolf Street. This address is inserted in "Line No. 1," as Mr. Jordan is using gas at Wolf Street, and the word "Yes" is inserted after the address. In control column is inserted the

(Continued on page 198)



Back of meter reading route sheet prior to centralization

Contribution of Customer Accounting Committee, W. E. Scott, Chairman.

DATE SET	SIZE	METER NO.	DATE REMOVED	N. D DATE	RATE
11.18.32	5	267407	8.27.37	11-30	S.S.
8.27.37	5	245975	10.1.38	6-37	
10.1.38	5	475092		9-38	

APPLIANCES	1	2	3	4
G. R.	✓	✓	✓	✓
A. W. H.		R	R	✓
W. H.	✓			
RFG.		✓		
H. H.				
C. SUR.				
C. RG.				
M. A.			✓	

DATE ON: 11.18.32

CUSTOMER'S NAME: Mrs Andrew Jordan
1526 Ritter Street

DATE OFF: 12.28.36

12.27.36 = Mrs. John Smith — 3.2.38
3.3.38 = Mrs. John Doe. — 5.20.38
10.1.38 = Mr. Paul Jones

REMARKS: 4 SERVICE IN OWNER'S NAME

PREVIOUS YEAR CONS	YEAR	CHANGE READING INDEX	INDEX	CONS 100 CU. FT.	YEAR
	JUNE				JUNE
4.0	11 MAY		150	36	12 MAY
3.6	12 APR.		11.4	40	12 APR.
3.2	11 MAR		7.4	38	12 MAR
3.8	12 FEB		3.6 4.0 AR	36	12 FEB
4.0	8 JAN		4	32	10 JAN
3.4	13 1937 DEC	96.0 on	972	12	12 1938 DEC
3.8	13 NOV	96.0 off	946	216	11 NOV
4.0	12 OCT		92.0	36	11 OCT
3.4	12 SEPT		88.4	38	11 SEPT
4.8	13 AUG.		84.6	46	11 AUG.
5.2	12 JULY		80.0	54	12 JULY
5.0	11 1936		74.6	54	12 1937
TRANSFER INDEX	6/11/36		69.2		

CHANGE READING INDEX	INDEX	CONS 100 CU. FT.
25.0 off	250	8 30
	244.2	
	21.2	32
16.8 on		12
16.8 off	18.0	18
	15.0	26
	12.4	24
	10.0	24
	7.6	20
	5.6	38
0 Set		18
23.0 on	18	14
	2.16	34
	18.2	32

YEAR	CHANGE READING INDEX	INDEX	CONS. 100 CU. FT.
JUNE			
12 MAY		101.2	16
13 APR.	7/6/39 79.6 on		4
12 MAR	7/6/39 79.6 off	99.2	12
13 FEB	7/6/39 98.0 on	98.0	
11 JAN	7/6/39 98.0 off		12
13 1939 DEC	7/6/38 96.8 on	96.8	6
12 NOV	7/6/38 96.8 off	96.2	24
11 OCT		93.8	26
13 SEPT.	90.0 Set 2.50 on 2.50 on	91.2	12 0
12 AUG.		2.50	
13 JULY		2.50	
13 1939		2.50	

DOMESTIC — CLASS CODE NO. 1

Front of meter reading route sheet subsequent to centralization

HOUSE TESTS: DATE ISSUED	DATE COMPL TD	RESULT: TEST	RESULT: INDEX
1/18/37	1/27/37	O.K	8.8

N S DATE ISSUED	SCRAP: DATE	SCRAP: INDEX	NO DAYS CONS
9/20/36	3/27/37	5.3	49
9/22/36			

CHANGE AND REMOVE ORDERS: DATE ISSUED	REASON	TEST REMARKS
8/27/37	L.C.	0.5% fast
10/1/38	N.C.	

MOVING ADDRESSES: STREET	CONTROL	ROUTE BOOK
1. 1425 Wolf St yw	127	1482
2. 1624 Diamond St no to John B. Edwards	109	1362
3. 1725 Porter St yw	138	1491
4.		

JOURNAL ENTRIES: DATE	NO.	CU FT	AMOUNT
3/26/37	12	3.6	3.16

DIMINISHED SUPPLY, AVG BILLS, ETC: DATE	REMARKS
3/27/37	Corrected bill meter for 3.82 to correct orig bill J. Williamson
12/20/38	N.O for reruns 12/6/38 index 96.8 bills to Jan. E.M.B.
1/20/39	N.O for reruns 1/6/39 index 98.0 bills to Jan E.M.B.
4/20/39	N.O for reruns 4/6/39 index 99.6 bills to Jan. E.M.B.

DIMINISHED SUPPLY, AVG BILLS, ETC: DATE / REMARKS

Back of meter reading route sheet subsequent to centralization

Commercial Section

Cookery Competition at National Exposition Uses Gas Fuel

Setting for the national cookery competition at the Women's National Exposition of Arts and Industries. A home service cooking demonstration was in progress while this picture was being taken

THE word "cook-off" is unusual but it adequately describes the second annual Cookery Competition held in New York City the week of March 29, sponsored by the Women's National Exposition of Arts & Industries. This competition was developed by the Exposition in an effort to create interest in the problems of modern cookery among the homemakers of the nation. Through the cooperation of the Commercial Section of the American Gas Association and the Exposition authorities, GAS was selected as the official fuel for this championship contest.

The contest rules had wide circulation through the member companies of the American Gas Association, and a conservative figure was that over 12,000 menus were submitted for judging. The menus were judged on the basis of nutritional balance, appearance, seasoning, flavor and cookery technique, and the best menu submitted from each of six regional divisions won for its contestant an opportunity to come to New York and participate in the final "cook-off."

The American Gas Association and the following companies in the Metropolitan New York area provided the two modern gas kitchens used for the cookery competition: Consolidated Edison Co. of New York; The Brooklyn Union Gas Company; Brooklyn Borough Gas Company; Kings County Lighting Company; New York & Richmond Gas Company; and the Long Island Lighting Company, with the International Nickel Company providing the cabinets and sink arrangements, comprising the Whitehead line.

The twin kitchens, designed by R. M. Martin, manager of display for Consolidated Edison Co., assisted by B. M. Mahoney and Mrs. Virginia Hart, were regarded as the hit of the show. A dark green background effectively set off the white equipment which comprised the very latest models in fully automatic gas ranges and gas refrigerators, with the sinks being provided with plenty of hot water by an automatic gas water heater.

The "cook-offs" were held each of three evenings and the first prize of $500 went to Mrs. Helen P. Angell of Columbus, Ohio. The other winners follow in order: Mrs. William J. O'Brien, Center Sandwich, N. H.; Miss Evelyne Mischke, Los Angeles, Calif.; Mrs. G. Lehman, Yonkers, N. Y.; Mrs. R. L. Maxey, Vilisca, Iowa; and Mrs. Percy Finks, Arlington, Va.

A popular feature during the week's Exposition was a series of afternoon demonstrations, particularly stressing the sales features of modern gas equipment, presented by home service directors of some of the contributing gas companies. The opportunity for these demonstrations was unexpected until the show started, and it was not possible for all the home service directors to arrange their programs to participate.

The home service division of the Consolidated Edison Co. presented demonstrations featuring thrift cookery meals, broiler meals and pastry baking. The demonstrators were Caroline Cecil and Linda Oeder. Elsa Steinberger of the home service division of The Brooklyn Union Gas Co. gave an effective "prospect demonstration" playing up oven meals and the flexible top burners. A cake baking demonstration brought out the evenness of baking on modern gas ranges, demonstrated by Mrs. Marjorie Wardman of the Long Island Lighting Company.

Jessie McQueen of the American Gas Association supervised the week's activities in the gas industry booth and participated as a judge in the competition meals.

Wide newspaper publicity throughout the United States was given to the cookery competition and a great deal of interest was shown by the visitors to the Women's Exposition. It is estimated that over 100,000 attended the Exposition during the week.

A. G. A. Convention Trip Sales Incentive

SIX sales representatives of The Gas Service Company, Kansas City, Mo., will receive free trips to the annual convention of the American Gas Association which will be held the week of September 27 at Cleveland, Ohio, according to an announcement by F. M. Rosenkrans, new business manager. These free trips will be the result of an unusual prize award set-up in a two-months' water heater campaign which got under way April 1. The first part of the campaign will close April 30 and the second part will be held in June.

During the campaign a point system has been arranged with 10 points being allowed for the direct sale of each automatic storage water heater, 5 points for the sale of each water heater already on the lines under the rental plan and 3 points for the renting of a water heater. All new business salesmen, including floor salesmen, who have 200 or more points total for the two months' cam-

paign are to receive gold watches, with the exception of the six salesmen winning the convention trip.

More points are being allowed on the direct sale of water heaters than for the rental of equipment in line with the policy of the company of gradually reducing the volume of rented equipment on its lines. It is believed that, with 36-month terms on time payment accounts, most installations can be made on the regular sales contract rather than the rental contract.

New business department salesmen will have an opportunity during the water heater campaign to win additional prizes in the national "Golden Faucet" contest sponsored by the Commercial Section of the American Gas Association. Many cash prizes are being awarded in this campaign and it is believed that salesmen with high production will win prizes in both the local and national contests.

While this is not the first time trips to the A. G. A. convention have been awarded to prize contest winners, it is the first time the convention has been held in Cleveland, the site of the A. G. A. Testing Laboratory. The opportunity for inspecting the appliance testing and research program conducted there in addition to the many other convention attractions, should prove an added incentive to salesmen participating in the contest.

Westchester's Ideal House Is All-Gas

THE Ideal House—1937," a beautiful Georgian type dwelling being erected at Fox Meadows, Scarsdale, Westchester County, N. Y. under the sponsorship of *House and Garden* magazine, will be an "all-gas" home. It will be one of a number of exhibition houses in Westchester County during the last two years that have been equipped to use gas for heating and air-conditioning, refrigeration, water heating and cooking.

The site of *House and Garden's* Ideal House is at the corner of Kent and Ogden Roads, Fox Meadows. Situated on a plot 150 by 200 feet, near the Bronx River Parkway, the house will command a view of that picturesque highway and can be reached with the utmost convenience by those desiring to inspect the house. Construction is well under way and it is planned to open the house early in June.

Julius Gregory, of New York City, is architect for the dwelling and architectural consultant for *House and Garden*. McSweeney and McKean, also of New York City, are the builders. The house will be completely furnished by R. H. Macy and Co., of New York City.

In its description of the plans, *House and Garden* explains that a modified late Georgian style was chosen "because it fits into the home-builders mood of today; it carries on the love of the traditional that Americans will never quite abandon; and it lends itself to modern structural materials." The thought is expressed that the home will be one for 1947 as well as for today.

The house will consist of a central block with two balancing wings. It was designed so that it can be adapted to structural conditions in various parts of the country and for this reason the walls may be of white-painted brick, of painted concrete black or of stucco over block, lath or hollow-tile, or even clapboard. In the present instance painted brick has been selected. The roof, which is to be of seamed copper, drops down behind a low parapet, a traditional feature of the late Georgian style. It is predicted that the Fox Meadows house will be a forerunner of similar homes to be built in various parts of the country under the auspices of department stores.

The house will have three floors. There will be a foyer, living room, library, kitchen and pantry on the first floor while provision is being made for six bedrooms and four baths on the floors above.

A dual system will be installed for gas heating and air-conditioning. This system consists of a winter air-conditioner and a steam boiler. The air-conditioner will serve the master portion of the house and the steam boiler will heat the maids' quarters, the baths and the garage.

These compact and attractive air-conditioning units, along with the 75-gallon gas automatic copper water heater, take up only a comparatively small space in the basement so that there will be an exceptionally large recreational room there.

In the kitchen of the home an 11-foot gas refrigerator will be installed and there will be a gas range having six burners, two ovens and a grill.

Westchester's Ideal House at Scarsdale, N. Y.

Refrigeration Sales Increase

SALES of automatic gas refrigerators by the Public Service Electric and Gas Co., Newark, N. J., were higher in the first quarter of 1937 than in any other year, gaining 11 per cent over the first three months of 1936. There are more than 21,000 gas refrigerators now in service throughout Public Service territory.

Regional Sales Group to Meet June 10-11

THE New York-New Jersey Regional Gas Sales Conference, sponsored by the Commercial Section of the American Gas Association, will be held June 10 and 11 at the Westchester Country Club, Rye, N. Y.

B. A. Seiple, Jersey Central Power and Light Company, Asbury Park, N. J., chairman of the regional council, and William J. Schmidt, Long Island Lighting Company, vice-chairman, are completing plans for a program that will be of interest and value to company executives as well as sales personnel.

Several novel features are being arranged including a panel discussion on Friday, June 11. At that time, Hugh H. Cuthrell, vice-president, The Brooklyn Union Gas Company, will cross-examine a number of sales managers concerning their policies and practices.

Home Service Committee

Elizabeth Sweeney, Chairman — Jessie McQueen, Home Service Counsellor

Recent Home Service Activities

REGIONAL MEETINGS INCLUDE HOME SERVICE

HOME Service has been much in the the news this Spring. Special programs and individual talks have been a part of most of the industry conferences. Elizabeth Sweeney, chairman of the Home Service Committee, has been a particularly active participant, addressing the following meetings: The New England Gas Association; the Mid-West Sales Conference; the Eastern Natural Gas Sales Conference, and the New Jersey Gas Association Convention. Miss Sweeney will also participate in the Pennsylvania Gas Association program on May 5. "Creative Sales Opportunities for Home Service" has been the theme of the various talks, and copies of this paper are appearing in the gas trade magazines.

The Home Service Committee for a period of three years has developed regional organization of home service directors. In New England Kathleen Atkinson of the Providence Gas Company as Chairman for 1936 conducted three home service meetings through the year, and her successor Mrs. Eleanor Kingsley of the Worcester Gas Light Co., of Framingham is making present plans for a June program. Mildred Clark, Oklahoma Natural Gas Co., chairman of the Southern-Southwestern group of home service directors, completed a general sessions' program on home service for the annual meeting in Memphis, and the new chairman will be Mrs. Carroll Miller of the United Gas System, Houston, Texas.

Home Service Chairmen

In the Mid-West Sales Conference Karen Fladoes presided as chairman of a full home service session at the Chicago meeting in February and Flora Dowler of the Binghamton Gas Works presided at a home service breakfast at the meeting in Pittsburgh of the Eastern Natural Gas Sales Conference.

On the Pacific Coast, Gladys Price of the Southern California Gas Co., at Los Angeles, is chairman of the home service group who presented a program in connection with the Spring Sales Conference of the Pacific Coast Gas Association. At the New Jersey Gas Association Convention the chairman of the home service luncheon meeting was Miss Florence Wren of the Public Service Gas and Electric Company at Hackensack.

The programs for several of these conferences were included in the February A. G. A. MONTHLY. On the Pacific Coast the program for April 1 was as follows: "Home Service Cooperation in Equipping Public School Laboratories," Ruth Kruger, Central Arizona Light & Power Company; "The Development of Newspaper Cooking Schools," Margaret Lackland, Southern Counties Gas Company; "High-Lights of Home Service," Gladys B. Price, Southern California Gas Company; "The Feminine Viewpoint," Doris Allen, Los Angeles Gas & Electric Corporation; and "Home Service Cooperation in Employee Education," Victoria Warner, Los Angeles Gas & Electric Corporation.

By JESSIE MCQUEEN
Home Service Counsellor

HOME SERVICE TRAINING COURSE

An educational training course for home service is to be given at the A. G. A. Testing Laboratory in Cleveland for four days,—June 15-18. The course is sponsored by the Home Service Committee and has been designed for a dual purpose. First, to offer to students and teachers in home economics colleges an opportunity to study at first hand the work of home service. This has come as a suggestion from many educators so that girls interested in entering the field of home service could receive an apprenticeship training in order for them to be more readily absorbed into the home service departments of gas companies.

Second, the course is open also to home service departments, particularly to those home service people who are rather new and would like this over-all picture to adapt to their own home service jobs. While the course is to be kept basic, and as a result perhaps elementary to experienced home service directors, still they are invited to attend. Sales managers in charge of home service also might find it to their advantage to attend such a course.

Detailed programs of this course will be sent to all home service directors shortly. The program will include a study of actual demonstrations, skits portraying different types of home calls, and practical instruction on the care and operation of gas equipment. The A. G. A. Laboratory offers an interesting setting for this course and a group of exhibits is being arranged to augment the instruction course. Kitchen displays will be in evidence as well as basement arrangements featuring heating and hot water systems.

The morning sessions will be held at the Carter Hotel, and the afternoon meetings at the A. G. A. Testing Laboratory, 1032 East 62nd Street, Cleveland. Elizabeth Sweeney, chairman of the Home Service Committee, will preside at all sessions. Any questions on enrollment may be sent to the Home Service Counsellor at A. G. A. Headquarters.

AT THE NATURAL GAS CONVENTION

For the first time an all-home-service meeting will be held in connection with the natural gas convention. The Home Service Breakfast has been a popular feature at the annual A. G. A. conventions and we are now offering a natural gas Home Service Breakfast on Thursday morning, May 13, at the Hotel Muehlebach, Kansas City.

The program will consist of greetings by Association officers, followed by a series of short talks by home service directors in natural gas companies, as follows: "Home Service Sells Natural Gas," Mildred R. Clark, Oklahoma Natural Gas Co.; "Gas Hospitality House," Mrs. Vera C. Ault, Public Service Co. of Colorado; "Home Demonstrations," Betty Boyle, The Gas Service Company; "Our Special Attention to New Range Users," Mrs. Mary Louise Hurster, The Laclede Gas Light Co.; and "Amusing Interludes in Electrolux Promotion," Jane Tiffany Wagner, Servel Inc.

C. B. Wilson, Arkansas Louisiana Gas Co., at Little Rock, will discuss the subject "A Sales Manager Views Home Calls." We hope for a good attendance of sales managers and home service people at this breakfast.

HOT WATER DEMONSTRATION CONTEST

A sales-slanted demonstration featuring the fully automatic gas range and the automatic gas water heater is the basis for a contest sponsored by the Home Service Committee. Ruth Soule, The Brooklyn Union Gas Co., is director of the contest and rules were submitted to all home service directors with the notice that the contest closes on April 30. A first prize of $25, a second prize of $15, and a third prize of $10 is the inducement in the hope of carrying out the purpose of the contest which is: First—to develop additional ways of introducing the story of the automatic gas storage water heater into home service demonstrations, and, Second—to give recognition to the modern type of sales-slanted demonstration.

Industrial Gas Section

Modernizing Gas Commercial Kitchens*

Frank H. Trembly, Jr.

By FRANK H. TREMBLY, JR.

The Philadelphia Gas Works Company, Philadelphia, Pa.

FORTUNATELY for the gas industry, the approach to this subject today is far different than it was five years ago. During this period considerable progress has been made in the modernization of gas heavy-duty cooking equipment. With this progress behind us we can now further study the situation and ascertain what remains to be done. We can be assured that there is still considerable more to be done.

If we would review for the moment the progress of the past few years, we would find that five years ago the heavy-duty gas equipment had remained unchanged for practically fifteen years. It lacked all of the characteristics of modern equipment. The great mass of antiquated equipment installed repressed the initiative of the entire industry.

Gas Equipment Modernized

Competition, represented by electricity, oil and coal, had made some progress, and in some markets had to some extent discredited the use of gas. The need of modernizing is great, and I am glad to say that the gas industry accepted the challenge and took the necessary steps to correct this situation.

In this transitional period, new heavy-duty gas equipment was designed and was generally adopted. These changes resulted in equipment much improved in appearance and entirely modern in operation. This change was sponsored by a number of individuals and groups, including:

Equipment manufacturers, who spent considerable time and money in modernizing and improving this equipment;

Hotel and Restaurant Committees of the Industrial Gas Section where the necessity of modernizing was discussed and programs devised for correcting this unsatisfactory condition;

Speakers on the programs of the national conventions carried this story of modernization to the entire industry; and

Special hotel and restaurant commercial meetings, such as this one, gave further impetus and encouragement to this movement.

There are many here at this meeting today who took a leading part in this program. The gas industry is indebted to all for the progress made in the modernizing of heavy-duty equipment.

The results of these combined efforts are apparent today. New commercial installations are being equipped with modern gas-fired heavy-duty equipment. Considerable progress has been made in the replacement of antiquated gas equipment. Competition has been largely stopped in heavy-duty appliances. Oil and coal are, for the most part, on their way out, and electricity has taken refuge in the smaller appliances.

These improvements in heavy-duty appliances have included the application of insulation and heat control to ranges and bake ovens; the development of modern ceramic broilers; the development of modern efficient deep fat fryers; the application of thermostatic controls to many appliances, including coffee urns and steam tables; and the re-design of existing kitchens using the minimum of cooking equipment.

Industry's Job

Today it is the responsibility of each utility to keep in step with this progress, and to make certain that these developments in heavy-duty equipment are reflected in the type of commercial cooking installations in their territory. Each of us must review for himself his own position in this program.

The task that lies immediately ahead of the gas industry in this field is to consolidate the gains already made, and to approach our goal of the modern all-gas restaurant by extending this improvement program to all of the gas restaurant equipment. So far as the heavy-duty equipment is concerned, we now have a strong story to tell of improved operation with new gas equipment. Let us beat our competition to the punch, particularly our educated competition, and be the first to tell our customers of the improved results which can be obtained with modern GAS equipment. These include better tasting food; less shrinkage in roasts; cooler kitchens; greater over-all economy; and other arguments which are familiar to all of us.

Let us not feel too happy, however, about the progress already made, as we still have a considerable distance to travel on this road. It is necessary that we complete the modernization of heavy-duty equipment in our present kitchens. It is also necessary that we further diversify kitchen equipment. This means taking a greater portion of the load from the top of the range and putting it where it can be more effectively handled in specialized appliances. These appliances include deep-fat fryers; stock kettles; vegetable steamers; fry top ranges; open top ranges; banks of roasting ovens; toasters; etc.

Steam Table Design

Today it is not enough that we have applied thermostatic control to steam tables. We must further improve the steam table through a complete re-designing that will permit at least three separate temperatures to be automatically maintained for various classes of food. It is further believed that improvements in steam table design will eliminate the water pan and will substitute for it the direct-fired air heater. I urge that development work be done in this direction to properly meet the more critical demands of modern restaurants in the storage of food prior to serving.

Unless the gas industry will modernize its counter cooking appliances and make them more attractive and effective for their intended use, this class of business will slip away to competition. I hope that the recent interest shown in this field is indicative of a greater interest to come which will result in gas appliance representation in this field that will defend it for us.

No discussion of this subject is complete without emphasizing the necessity of a proper servicing of gas commercial appliances on the part of the utility. This is the most concrete evidence of the service that the utility offers to its customers, and when satisfactorily performed, will pay real dividends in customer satisfaction and load retained.

In summary, I wish to say that we have gone far on the road to modernization; that the distance we have travelled should give us encouragement for the longer journey ahead. Only when we have completed this journey can we feel that we have fully possessed ourselves of this field to the exclusion of competition. Only then will we have fully discharged our obligation to our customers and to ourselves.

* This talk opened the symposium—Modernizing Gas Service and Increasing the Cooking Load—at the National Commercial and Hotel & Restaurant Sales Conference, Philadelphia, March 2-3, 1937.

Industrial Gas Men on Convention Program

Hale A. Clark

AT the Kansas City convention of the Natural Gas Department to be held May 10-14, the Industrial Gas Section will conduct an open forum at which four vitally important subjects will be thoroughly analyzed. Four outstanding gas men will each lead the symposium on one subject. These men are Henry O. Loebell, of the Natural Gas Pipe Line Company of America, C. L. Brockschmidt of the Mississippi River Fuel Corp., St. Louis, Mo.; E. J. Hatzenbuehler of the Lone Star Gas Co., Dallas, Texas; and Louis Hill Hungate, Jr., of the Memphis Power & Light Co., Memphis, Tenn. Hale A. Clark of the Detroit City Gas Co., Detroit, as vice-chairman of the Industrial Gas Section will preside.

"Specialized Selling of Natural Gas" will be the first subject to be taken up and will embrace ways and means for obtaining the "marginal" industrial and commercial loads that most manufactured gas utilities have, but which are often overlooked by natural gas utilities. Among the outstanding authorities who will present facts and figures in addition to Mr. Loebell, the leader, are D. W. Chapman of The Peoples Gas Light & Coke Co., Chicago; F. Marion Chelf of the Public Service Company of Colorado, Denver; O. S. Hubbard of the Eclipse Fuel Engineering Co., Kansas City, and others.

"Natural Gas in the Heavy Heating Industries" will occupy the next forum and will cover steel, glass, china, brick, cement, smelting, etc. In addition to the leader, Mr. Brockschmidt, others who will present valuable information will include T. E. Wood, The Manufacturers Heat & Light Co., Pittsburgh; Karl Emmerling, The East Ohio Gas Co., Cleveland; E. P. Kramer, Atlanta Gas Light Co., Atlanta, Ga.; J. H. Gumz, Pacific Gas & Electric Co., San Francisco, and others.

The forum covering "Gas Engine Selection and Application" will be led by Mr. Hatzenbuehler, chairman of the Gas Engine Committee of the Industrial Gas Section. This broad theme includes power air-conditioning and power generation as well as off-peak gas power installations. Among those who will contribute from their experience in this field are Edwin Snook, Amarillo Gas Co., Amarillo, Texas; Dwight Edwards, Oklahoma Natural Gas Co., Tulsa, Okla.; W. J. McIntyre, Arkansas-Louisiana Gas Co., and others.

The final forum will consider "Increasing Efficiencies of Gas Boilers" led by Mr. Hungate and will cover all phases of boiler five box design, boiler operation and control. Worthwhile contributions will be made by L. S. Reagan, Webster Engineering Co., Tulsa, Okla., and others.

INDUSTRIAL GAS AT WORK

GAS FURNACES UP IN THE AIR! THE ENDS OF AUTOMOBILE SPRINGS ARE HEATED TO FORGING TEMPERATURES IN THESE ELEVATED FURNACES FROM WHICH THEY AUTOMATICALLY DROP TO THE FORMING MACHINES

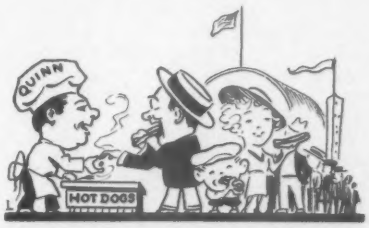
GOING AHEAD

WITH INDUSTRIAL GAS

Consolidated Edison Company has just installed a gas summer air conditioner in a pill factory that makes a million aspirin tablets a day. No more headaches from a million hang-overs and no more headaches for the production manager.

The B.t.u. ratio of gas and electricity for immersion soft metal heating is now down to 1.15 net —1. An important reason for the popularity of gas.

Our English gas friends are starting a movement to see that all new buildings are "carcassed" for gas. Not a bad idea if each industrial gas man made sure all factories in his town were properly carcassed.



Past Chairman Joseph F. Quinn sat in his new office the other day smiling because his hobby of Commercial Gas is clicking in that section of New York Town across the bridges. First gas was sold this winter for the 1217 acre 1939 World's Fair, for heating field and construction offices. How many "hot dogs" do you expect to cook with gas, Joe, before the Fair is over and the 50,000,000 visitors have gone home?

Eighty-six large gas unit heaters were also put into service by Brooklyn Union at the new subway shops adjacent to the Fair Grounds.

All aboard for the Industrial Gas Sales Conference in Chicago, June 8 and 9. The best opportunity of the year to SEE industrial gas at work and to LEARN how and why it is accomplishing real results in modern factories.

Among the magazines that have recently published illustrated articles furnished by the Publicity Committee of the Industrial Gas Section are:

Power Plant Engineer
Steel
Ceramic Industry
Foundry
Hotel Management
Drug Store Retailing
American Restaurant
American Builder
Industrial Finishing
Metal Cleaning and Finishing
Mill and Factory
Metals and Alloys
Industrial Heating
Cracker Baker
Furniture Index

Technical Section

M. I. Mix, Chairman H. W. Hartman, Secretary J. V. Postles, Vice-Chairman

Distribution Men Hold Outstanding Meeting

THE fourteenth annual Distribution Conference was called to order by Chairman D. P. Hartson in the Wardman Park Hotel in Washington, on Monday morning, April 12 at 10:00 A.M. This conference was one of the largest ever held, there being close to 500 in attendance of whom nearly 100 were women.

Mr. Hartson welcomed the members and spoke of the history of the Distribution Conferences.

Marcy L. Sperry, president of the Washington Gas Light Company, gave an address of welcome to Washington. Mr. Sperry stressed the importance of distribution work and the necessity of it tying in with the rest of the gas business.

George W. Bean, of Washington, D. C., spoke on the necessity for cooperation between distribution and utilization engineers in Government contracts. He stressed the importance of the distribution engineer in securing new business and stated that the Government is anxious to know all that it can about gas and gas service.

The next paper was on "The Distribution Man's Part in the House Heating Program" by H. B. Johns of Chicago. He stated the distribution engineer's duty is to prevent trouble in house heating appliances and that this can be done in two ways.

1st. By selection and approval of appliances.

2d. By application of approved appliances to individual installations.

E. A. Munyan, of Cincinnati, spoke of the disaster caused by the Ohio River flood in his city and stressed the fact that the only way they were able to keep going was by the loyalty and hard work of all the employees. They lost no men, had no fires and had no explosion and he attributes it all to "organization."

At this point F. M. Goodwin, of Boston, offered a resolution of commendation to the gas engineer in the Ohio River Valley who had fought such a good fight against the flood. It was unanimously adopted.

The last paper of the first session was by A. Gordon King of A. G. A. headquarters who spoke on "Shade Tree Protection." Mr. King pointed out that a severe winter has a similar effect on trees as leaking gas. If gas does kill a tree, it may be by dehydrating the ground around the roots rather than the toxic

Long Distance Sextet—*Left to right, front row: C. D. Robison, Omaha; J. D. von Maur, Toronto; H. L. Gaidry, New Orleans. Back row: Guy Corfield, Los Angeles; Martin I. Mix, Chicago; F. M. Goodwin, Boston*

On the Spot—*Left to right: Dr. Lyman J. Briggs, director, National Bureau of Standards; E. F. Schuldt, Chicago; R. R. Finley, Dayton*

The Rostrum—*Left to right: Marcy L. Sperry, Washington; D. P. Hartson, Pittsburgh; H. W. Hartman, New York*

View of 1937 Distribution Conference in session

effect of any of the constituent gases. He stated that it may be necessary to completely analyze our gas in the future to determine the relative amounts of gases that may be toxic. The claim that ethylene kills trees is not always truthful as this gas stimulates some plants. In looking at trees supposed to have been injured by gas it is well to look for the presence of road tars and drip oil as both of these are toxic to tree life.

Mr. King's final caution was for companies sued for destroying trees to go slow before paying and recommended further study on the tree life.

The Tuesday morning session opened with a report by C. F. Turner, chairman of the Committee on Pipe Coatings and Corrosion. Mr. Turner spoke of the work of Dr. Ewing and the preparation of a manual on this subject in which the A. G. A. was cooperating with other national associations.

During the discussion of Mr. Turner's report, Dr. Speller introduced and emphasized the importance of the question of primer study. Martin I. Mix spoke of the necessity for the continuity of study due to the fact that the corrosion problem is a continuous one. Mr. Mix also pointed out that relatively little money has been spent on corrosion research.

Dr. Lyman J. Briggs, director of the National Bureau of Standards, spoke of the importance of the work done by the Bureau in the testing of governmental purchases. He stated that the Bureau was housed in 12 buildings located on a 50-acre plot and had 850 employees. He ended his remarks with a plea for research which would furnish new industries thus eliminating unemployment.

Dr. Scott Ewing, research associate of the National Bureau of Standards, then spoke on "Engineering Principles Applied to the Soil Corrosion Problem." In speaking of corrosion leaks he stated that equations that attempted to predict them were not absolutely accurate but were much better than an operator's judgment. He spoke further on the specifications for pipe coating materials.

The next paper was by A. V. Smith, of Philadelphia, on the "Theory and Use of Cathodic Protection." He stated that the study of this subject was closely related to soil corrosion. Mr. Smith showed several charts that explained the theory of corrosion by galvanic currents, how they are generated and how cathodic protection operates. He next showed an animated film depicting how corrosion occurs in pipe walls due to the several causes.

Robert Kuhn, of New Orleans, in a prepared discussion of Mr. Smith's paper stated that in addition to the application of cathodic protection recommended by Mr. Smith for rural lines, he had successfully used it to protect mains in city streets.

The final paper of the morning session was by E. F. Schuldt on "A Precision Method of Locating Gas Leaks." The apparatus developed and described by Mr. Schuldt consists of two bags spaced some 4 to 9 feet apart which, when deflated, can be inserted in a gas main to be tested. When at the proper location the bags are inflated to such an extent that they compress the gas between them. This pressure between the bags is indicated on a gauge and the operator determines the tightness of the main by the stability of this increased pressure. The device is quite ingenious and it is claimed it has saved The Peoples Gas Light & Coke Company, Chicago, money in locating leaks under crowded Chicago streets.

The interest which marked the sessions on the two preceding days was sustained on Wednesday, the meeting being opened by

(Continued on page 193)

It Must Have Been Good—*Left to right: C. D. Robison, Omaha; D. P. Hartson, Pittsburgh; H. W. Hartman, New York*

Speaking of Cathodes—*Left to right: A. V. Smith, Philadelphia; G. W. L. R. Travis, New York; E. F. Schuldt, Chicago*

A Happy Pose—*L. A. Dixon, Pittsburgh, left, and Willard F. Rockwell, Pittsburgh*

Howdy Colorado—*D. P. Hartson, Pittsburgh, left, welcomes George J. Heckendorn, Denver*

Pipe Joints for Lunch— *Left to right: K. R. Knapp, Cleveland; H. L. Gaidry, New Orleans; D. P. Hartson, Pittsburgh; S. P. Cobb, New York; G. J. Heckendorn, Denver; H. L. Peden, New York; A. H. Abbott, Minneapolis; W. A. Dunkley, Memphis; L. W. Little, Chicago; C. S. Nairne, New Orleans*

Production and Chemical Conference Offers Interesting Program

J. F. Anthes

THE annual joint conference of the Production and Chemical Committees will be held at the Hotel New Yorker, New York City, on May 24-25-26.

Both committees have conscientiously tried to prepare a program that would be interesting and instructive and reasonably up-to-date. Several of the subjects are decidedly up-to-the-minute and of course there are other matters of importance that naturally come under progress reports. Such an arrangement assures a balanced program.

Those who are to present papers have given freely of their time and effort in an endeavor to cover their subject as thoroughly as possible. In some cases a considerable amount of money has been spent to make a paper possible.

Mullaney To Speak

Bernard J. Mullaney, vice-president of The Peoples Gas Light and Coke Company, Chicago, has accepted an invitation to address the conference at the first session, May 24. Mr. Mullaney has not yet announced the subject of his address but any message which he will bring to the conference is certain to be timely, interesting, and of real value to everyone.

The Program Committee for the conference, of which C. R. Locke, of the Chicago By-Products Coke Company, and E. M. Bliss, of the Public Service Electric and Gas Company of New Jersey, are co-chairmen, has not only arranged for the papers to be presented at the conference but has also made plans for luncheon conferences which are similar to those held last year. These luncheon conferences are treated more fully later on in this article.

Production Committee Papers

The following papers have been secured under the auspices of the Production Committee, of which R. E. Kruger of the Rochester Gas and Electric Corporation is chairman:

"Crushed Coke Sizes as Affected by Coke Breeze Admixture to Coal Prior to Carbonization."

F. J. Pfluke

This paper presents the results of tests run at Philadelphia and Rochester on coke made from blended coal and 100 per cent high volatile coal with breeze added.

The tests were run to determine the effect on sizes when the coke is subjected to the crushing necessary to prepare it for the domestic market.

R. E. Kruger

Chairman, Production Committee

J. F. Anthes

Chairman, Chemical Committee

"Dust Elimination in Coke Plants"

R. D. Williams

This paper deals with dust control and removal methods in various operations in a coal carbonization plant. The application of vacuum cleaning for the removal of coal dust from the floors and other parts of a coal handling plant is described. Considerable data are given relative to the development of satisfactory dust removal equipment for a coke preparation plant.

"Effect of Blending Certain High-Volatile Coals with Beckley Bed Coal on the Yield and Quality of Carbonization Products"

J. D. Davis

This paper contains data and information which should be of real value to all technical men interested in the blending of coals.

"Some Aspects of the Flexibility of Plant Control of the Heavy Oil Process"

W. E. Lebo

This paper describes the flexibility in controlling the quality of the gas leaving a plant mixing coal gas and 530 B.t.u. carburetted water gas.

"A New Idea in Gas Manufacture"

Leon J. Willien and E. A. Dieterle

The paper suggests that the heat developed in the manufacture of blue gas be utilized in an oil cracking process to obtain more valuable by-products rather than as at present to obtain the maximum amount of permanent oil gas.

"Internal Inspection of Water Seal Holders"

A. T. Ireland

A discussion of the disposal of the water from tank or pit from the viewpoint of stream pollution and the possibility of forming explosive mixtures in sewers; also a general summary of what has been found, principally in Philadelphia, when examining holders internally.

"The Economics and Operation of Automatic Grates"

R. H. Arndt

This paper reviews briefly the reasons for the development of automatic grates and explains their application in modernizing operations to reduce cost. The article includes an extensive tabulation of data relative to automatic grate operations in many American plants, and in connection with various methods of operation.

Chemical Committee Papers

The Chemical Committee under the chairmanship of J. F. Anthes of The Brooklyn Union Gas Company, Brooklyn, N. Y., will offer the following papers:

"Effect of Reducing Atmospheres on the Combustion of Industrial Gas"

W. M. Couzens and E. O. Mattocks

One of the more interesting and useful purposes for which gas in industry is inherently suited is process control in the metal and alloy industries. Heat treating of metal parts is so vital to American industry today that every manufacturer fabricating such parts is finding a most useful advantage in gas furnaces for all such parts.

For the past seven years the A. G. A. Testing Laboratories have carried on investigational work of a very fundamental nature relative to the industrial uses of gas under the supervision of the Committee on Industrial Gas Research, of which F. J. Rutledge is chairman.

Accumulated data on the utilization of industrial gas resulting from these studies, when applied to modern industrial practice, expands the use of gas in industry almost to the exclusion of other fuels. Pertinent findings are at present somewhat contrary to the accepted technical knowledge on the subject of controlled atmospheres. New methods of sampling and a new precision instrument for analyzing very small quantities of constituent gases were necessary for this study and have been developed.

This paper should be of real interest and will greatly enhance the knowledge of the subject for the chemists and industrial men of the gas industry.

"The Role of the Chemical Engineer in House Heating"

C. F. Turner

Because of the increasing volume of gas being sold in many cities where house heating has been placed on gas company lines it was considered advisable to bring this subject to the attention of chemists and engineers. House heating is fundamentally a chemical engineering subject and chemists in the gas industry should not only be interested in but ought to take an active part in its development.

This paper is written from the viewpoint that constantly increasing competition is making more imperative each day the more intelligent use of the principles of heat application to house heating, and that the

chemist and chemical engineer can lend his assistance in three ways; first, in training employees; second, in bringing about better utilization; and third, by conducting further research into the principles of heat application, better and more durable materials for appliance construction, by improving gas quality, etc.

Mr. Turner will show how the chemist can better the engineering of his company's house heating department. It is his belief that more than enough has been written about how to sell more house heating, but that there is very little in the literature about how to hold what has already been sold. This is in some ways more important than selling new prospects.

This paper will contain much worthwhile data and information and should afford those companies interested in house heating an opportunity to discuss their problems and to exchange views on this important subject.

"Treatment of Holder Waters to Eliminate Paint Discoloration"

Dr. J. R. Skeen

The discoloration of holder lifts has been of some concern to the industry for many years. According to a study made of this subject by the United Gas Improvement Company Research Department the discoloration has been found to result from the presence of an "iron organic complex" due to the presence of iron bacteria. Colloidal rust colored scums are formed on the surface of the water and these scums attach themselves to the surface of the lifts as the latter rise from the water, where under the action of the sun they become tough adherent deposits.

It has been found possible to control these organic growths by suitable chemical treatment of the holder waters. Such treatment, however, places certain limitations upon the character of the paints which may be employed. A limited number of satisfactory paint systems in three colors, aluminum, red, and black have been developed for use with these treated holder waters by cooperative research with a paint manufacturing company.

"Effect of Cyanogen-Organic Sulphur upon the Stoppage Problem"

E. J. Murphy and A. R. Bayer

This paper will deal with substances not heretofore discussed but which in the light of new knowledge are now believed to be a real factor in the stoppage problem.

The seeming contradiction of constantly occurring needle valve stoppages and consistently low concentrations of nitric oxide in the gas leaving the plants (0.3 gram per million cubic feet) gave rise to the need of a reexamination of the stoppage problem insofar as the writers' company was concerned.

Certain experiments that were started to demonstrate the possible separation of solid particles in the gas by a wetting out process gave visual effects which caused a change in the original plan and led to the study of the effects produced by cyanogen and certain sulphur groups in causing stoppages on needle valves, particularly those made of brass.

"New Wrinkles"

H. J. Meredith

All of us, whether in the laboratory or in the plant, have at some time developed various time-saving devices, gadgets, and improved techniques in laboratory procedures, to meet some particular need. Few, if any, of these so-called "new wrinkles" have been presented to the industry at large. H. J. Meredith was delegated by the Chemical Committee to collect as many of these "new wrinkles" as possible and to present them at the Production and Chemical Conference in the form of a paper. Mr. Meredith has written to many chemists and engineers and will include any contributions which they have to offer in his paper. This should prove to be a most interesting and valuable contribution.

"Index of Conference Papers"

R. H. Oppermann

There has long been a real need for an index of material of a chemical engineering nature presented before the Conventions and Conferences of the American Gas Association and before the American Gas Institute. At the request of the Chemical Committee R. H. Oppermann, librarian of The United Gas Improvement Company, made a comprehensive study and review of this matter and has prepared a most complete and up-to-date index which will be available to all attending the conference. This index will be of permanent value to all chemists and engineers of the gas industry.

Luncheon Conferences

An entire afternoon will again be devoted to the Luncheon Conferences which were held for the first time at a Production and Chemical Conference last year. They give the proper atmosphere for an informal discussion of the many problems not covered in the more elaborate investigations presented at the other sessions. Here everyone will have the opportunity to ask questions and speak as he pleases. The meeting is to be strictly informal in every respect. All gas men who have attended conferences of this kind realize that such gatherings have an important place on the program. Realizing the impossibility of an individual attending more than one conference the committee has reduced the number of luncheon meetings from five to the following three: Coal Carbonization and By-Products, Water Gas Operation, and Gas Conditioning and Purification.

The Carbonization section will be conducted by A. B. Huyck of The Brooklyn Union Gas Company, while the Water Gas section will be under the chairmanship of K. B. Nagler of The Peoples Gas Light and Coke Company of Chicago. A wide range of controversial subjects applying to operation of plant and preparation of products exists in each of these major sections so that real discussion and valuable information can be expected from attendance at either of these meetings.

Such subjects as double crushing, sludge handling, and bulk density of coal as it affects charging operations are typical of what might come up in the Carbonization section while discussion of the Sharpless Centrifuge for breaking tar emulsion, steam jet refrigeration for gas cooling, and the Semet Solvay Reverse Flow Process might occur in the Water Gas section.

The Gas Conditioning meeting will have as its chairman E. J. Murphy of The Brooklyn Union Gas Company, Brooklyn, N. Y. It is expected that a wide range of subjects will be covered in the discussion since all the processes required to change the foul gas as first produced to our finished product, "Gas, the Ideal Fuel," properly fall under this heading. Recognizing the fact, so well presented by Herman Russell, president of the American Gas Association, that gas is a competitive fuel, then too much emphasis cannot be placed on conditioning the gas to prevent poor service or actual outages whether they be due to excess moisture, corrosion products, naphthalene, gum, etc. It is hoped that this meeting will bring together men with unsolved problems and men who have acquired experience in handling similar problems.

DISTRIBUTION CONFERENCE

(Continued from page 191)

the report presented by D. P. Allen, of the Washington Gas Light Company, for the Committee on Meters and Metering. Mr. Allen dealt at length with the answers furnished to a questionnaire which had been distributed by the Committee on Meters and Metering and which apparently had been well received by the industry. When all of the details have been worked up and adequate comparisons are available the report of the committee should prove useful and valuable.

The report of the Subcommittee on Pipe Joints and Pipe Materials was presented by the chairman, L. W. Tuttle, who explained the three principal items under consideration by the committee were the theory and metallography of welding, the effect of a changeover on pipe joints, and specifications for the installation of bell joint clamps. Progress reports were presented on these subjects.

R. E. Finley, vice-president of The Dayton Power & Light Company, described experience with a liquid, Carboseal, which is poured into a section of leaking cast iron main where dehydration of the joint has occurred resulting in a contraction in the volume of the jute packing. The Carboseal expands and seals the jute packing and so the joint against leakage.

Mr. Finley's presentation was somewhat in the nature of a progress report and covered the chemical aspects, the history of development, laboratory and field tests, and detailed descriptions of the application methods. Interesting cost tables showing

the results of hose and gravity methods of application were included.

A highly comprehensive study on the effect of varying water vapor content of gas on the volumetric conversion factors was presented by Stephen P. Cobb, of Ebasco Services, Inc., New York, which is so replete with curves, complicated formulae and higher mathematics as to suggest that this report should find its place among the reference works. Definitions of relative and percentage saturation are given including dew point and such matters as the variation of partial pressure of water vapor and volumetric conversion factors together with a well-rounded discussion on these intriguing matters.

Tar Cameras Described

An interesting dissertation on the changes occurring in a distribution system as a result of changes in characteristics of gas supplied is found in C. D. Robison's paper bearing that title. Some interesting tables and description were presented by the author in connection with the use of tar cameras, eleven of which were installed at suitable testing stations scattered throughout the distribution system. Determinations are made each month as to the relative humidity of the gas and the quantities of condensible oils, gum, and ash in the gas.

While Mr. Robison feels that no logical conclusions can be drawn from the figures as to dust, he believes that the tar cameras will show any increases that may later occur in the dust content. Mr. Robison does not express a definite opinion as to whether the use of tar cameras and filter papers is the last word in obtaining the desired information but he strongly suggests that more exact data as to the conditions existing in the distribution systems should be had. The apparatus described accomplishes that result in the given situation. Detailed directions for installing and operating the equipment are included in the illustrated paper.

A very brief report was presented by Erick Larson on Gas Main Structural Strength which was largely in the nature of "thinking out loud" in order to get some reaction, suggestions and possible experience from the assembled distribution engineers.

In the unavoidable absence of the chairman of the Committee on Cast Iron Pipe Standards, a very brief progress report was presented by G. W. L. R. Travis.

The discussion of all of the papers and the committee reports was full and very complete and many valuable suggestions were received therefrom.

At the close of these reports the meeting resolved itself into an open forum, the first order of business being presentation of summaries of the following luncheon conferences, with H. L. Gaidry, chairman of the Luncheon Conferences Committee, presiding:

1. Meters, presented by D. P. Allen.

2. Customer Service, presented by C. E. Muehlberg.

3. Pipe, presented by C. S. Nairne.

4. Portable Equipment, presented by E. H. Eacker.

5. Employee Training, presented by J. A. Perry.

These round table luncheon conference summaries presented in this manner proved particularly valuable to those who naturally were unable to be in attendance at all of the conferences—they were held simultaneously. The reporters for the conferences did such an excellent job that lively discussion ensued to such an extent that when the motion to adjourn was made at 4:30 p.m. it was quite apparent that the meeting might have been continued "far into the night."

Included in the audience were three German visitors—Max Komers, engineer, United Steel Works, Dusseldorf; Hans Schlumberger, superintendent, Gelsenkirchener Mines, and Dr. J. Heinrich Klas, chemist, German Pipe Works, Dusseldorf.

The general consensus of opinion as to the Conference is well expressed in a letter received this week at Headquarters containing the following: "The conference, I think, was a very pronounced success and I might say I heard several others say it was the best the Association has ever had."

Columbia Courses in American Gas Practice Carry On

INSTRUCTION in the courses in American gas practice, which have been offered during the last decade by the Home Study Department of Columbia University and sponsored by the American Gas Association, will not be affected by the recent action of the University Trustees discontinuing organized home study at Columbia.

On account of the active interest of the gas industry in these courses, they will be continued under the Extension Division of the University. They will continue to be conducted by Professor J. J. Morgan of the Chemical Engineering Department. Instruction will be by mail as heretofore. The discontinuing of the Home Study Department at Columbia affects only the local administration of the gas practice courses.

Started in 1925

The Columbia courses in American gas practice were started as a home study course in manufactured gas during the autumn of 1925, and were designed to replace the Gas Trustees Course in Gas Practice which was discontinued a few years earlier. The course was written by Professor J. J. Morgan under the direction of a committee from the American Gas Association consisting of A. E. Forstall, C. E. Paige, F. C. Weber and W. S. Yard. The need for a textbook for the course led to the writing of Professor Morgan's well known books on American Gas Practice. The course immediately became popular with the gas industry and partly on account of an accumulated demand attained an enrollment of over 1,000 during the first year. The total enrollment in this and the revised courses has now passed the 1,800 mark.

When the text was revised in 1931-35, it was changed to include distribution and utilization of all kinds of city gas, natural gas as well as the various kinds of manufactured gas. The courses are now offered in two parts, Part I, The Production of Manufactured Gas and Part II, Distribution and Utilization of City Gas. The latter is suitable for employees of companies distributing natural gas or mixed gas as well as straight manufactured gas.

The courses are technical in nature and adapted for students who have had a high school education including courses in chemistry and physics. They are also especially suitable for college men including cadet engineers entering the gas industry.

Enrollments are accepted at any time and may be for either Part I or Part II alone. A special reduction in fees is made for students who enroll in both parts at the same time.

Further information will gladly be furnished by Kurwin R. Boyes, Secretary, American Gas Association, 420 Lexington Avenue, New York City, or Professor J. J. Morgan, Department of Chemical Engineering, Columbia University, New York City.

Personnel Changes

R. M. CONNER, director of the A. G. A. Testing Laboratories recently announced the following changes in executive personnel:

Early in February, Dr. F. E. Vandaveer was transferred to Cleveland from Los Angeles to resume his duties as supervisor of both the Cleveland and Pacific Coast Branch Laboratories directly under Mr. Conner.

W. M. Couzens has been placed in charge of all the Laboratories research activities.

K. H. Flint has been elevated from chief inspector to assistant chief engineer in the Testing Department. W. H. Vogan has been appointed chief inspector to fill the vacancy left by the promotion of Mr. Flint.

"Let us give our history a rest. The very fact that we have been active and successful for more than a century leads some people to assume that we are old-fashioned."—Sir David Milne-Watson.

Testing Laboratories

Laboratories Develop New Industrial Test Equipment

IN the testing of appliances and the conduct of research relating to the domestic and industrial utilization of gas, accurate sampling and accurate analysis of samples are essential.

Over the last eleven-year period the Testing Laboratories of the American Gas Association have made great progress in this respect. While much of this new equipment is of a routine nature, some few pieces developed for industrial gas research purposes are of such outstanding novelty and practical advancement in technical circles that they are decidedly worthy of comment. The pieces of apparatus described in this article were developed in connection with high temperature research projects sponsored at the Laboratories by the Committee on Industrial Gas Research.

Research has shown that, where a sample of hot gases is withdrawn through a sampling tube, changes may take place in the sample which are due to two causes. The first is temperature and rate of cooling of the sample, and the second, the nature of the sampling tube material.

Sampling Tube

The water-cooled sampling tube is the answer to these problems and in the form employed is an exclusive Laboratories' development. Without being too technical, it can be noted that the rapid cooling of a gas sample will maintain the original relationship of the component parts with a reasonable degree of uniformity. On the other hand, a comparatively slow cooling of the gases, as when they pass through a hot sampling tube, almost invariably leads to further combinations and chemical changes of the component gases, so that the mixture of gases leaving the outlet end of the usual type of air-cooled sampling tube is of a vastly different characteristic to that entering it.

The water-cooled sampling tube, by introducing a jet of cold water against the very front of the tube, serves to produce the quick chilling of the sampled gases that has been demonstrated is absolutely prerequiste to success (See Figure 1). The gases themselves are conducted through a quartz tube to the analysis apparatus and the quartz tube has provided the second key to the solution of this problem of sampling tube material with its attendant effect on the sample and its characteristics.

Before such things as these were known, it was not unusual to use any handy length of gas pipe with some sort of tubing attached. When this was done, the heating of the pipe itself not only produced chemical changes in the ferric content of the pipe, but made it possible for the gases to cool more slowly and produced a mass time coefficient that further allowed for still more easily consummated changes between the gas and the iron of the pipe. In addition, it permitted a complete readjustment of equilibrium conditions within the gas sample. Chaotic results and non-reproducible conditions were common, and for many years tolerated. The quartz tube, however, is not appreciably affected by the character of the consumed gas, be it either oxidizing or reducing, and today's results, obtained with the water-cooled sampling tube, are both uniform and reproducible, representing a distinct advance in the art of sampling high temperature combustion products.

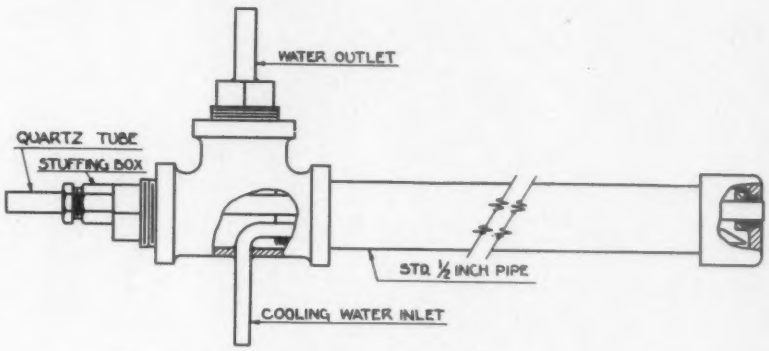


Figure 1—Water-cooled sampling tube

By B. K. PAGET

A. G. A. Testing Laboratories

Having obtained the most accurate sample possible, it still remained to analyze it properly and it was not long before the Laboratories' staff realized that the accuracy of the then available gas analysis apparatus was far from adequate.

When flue gas analysis was a major problem of industrial engineers, the accuracy of the common Orsat was considered adequate, but as progress has been made in the application of gas to industrial heating processes, there has been increasing need for much greater accuracy. This can be attributed to the greater use of consumed and partly consumed gas atmospheres in industrial metal treating furnaces to produce either bright annealing, soft sheets, hard sheets, carburizing or de-carburizing, coloring, or any other of the many requirements of the metal industries.

Ultra-Precision Apparatus

Parallel with this increased use for these purposes has come an increased demand on the part of the metal markets for strict uniformity of product and industrial people have attempted to meet this demand with more accurate temperature and time control apparatus. But the research of the Laboratories has shown that the gas characteristics have an equally great or greater effect on the resulting product, and has further found that comparatively small changes in the gas characteristics, literally the furnace atmosphere, has made wide fluctuations in results. Many of these comparatively small changes in the gas atmosphere character were not measurable within the limits of accuracy of the then available gas analysis apparatus. So it became necessary for the Laboratories' staff to develop an ultra-precision Orsat apparatus concurrently with their research work on furnace atmospheres conducted for the Association's Committee on Industrial Gas Research.

Early in the work it was found that the ugly head of "non-reproducible" results was looming up strongly and the curse of the test engineer was rampant. A gas sample, split into two parts and run successively through a series of tests and test apparatus, came out the other end with totally dissimilar answers.

The usual Iodine Pentoxide machine had an accuracy of 0.002 per cent, but its use-

fulness was too limited for this work. In the first place, it could only be used to measure quite small amounts of CO, and further could not be used for analyzing the other products when they were of a reducing character. The Testing Laboratories' new ultra-precision gas analysis apparatus, on the other hand, not only has the same fine accuracy of 0.002 per cent, but also can handle with equal facility either large or small quantites of reducing products or any other gases normally analyzed on the conventional but less precise Orsat type of instrument. (See Figure 2.)

To accomplish this analysis with such accuracy, certain rules of conduct have been found necessary. Volume, and this is a volumetric analysis, varies considerably with temperature. Hence very close control of room temperature is necessary, as also the sample temperature, saturation of the sample, saturation of the air in the compensator and several other factors. All these variables have been placed under controlled conditions and now readings taken by different operators can be checked to within 0.002 which is the limit of accuracy of the present calibration of the gas measuring burette.

With the successful completion of these two pieces of testing equipment, the true sample of gas and its accurate analysis are an accomplished fact. But there developed a third need for accuracy in order that the metal industry might have uniform production and that our refrigerators, ranges and appliances generally might have that sleek, modern, and well-groomed appearance that present streamline styling demands of us in the gas industry just as much as it does the motor car manufacturer.

This third need was the accurate measuring of gas temperature and the major difficulty was the avoidance of radiation effect to and from the thermocouples when they were used (generally at temperatures below 2,200 degrees Fahrenheit). Platinum—platinum rhodium thermocouples could be used up to 2,800 degrees Fahrenheit, but here the difficulty was a short life of the elements and a high replacement cost. Above 2,800 degrees Fahrenheit, the problems lay in a new and uncharted field.

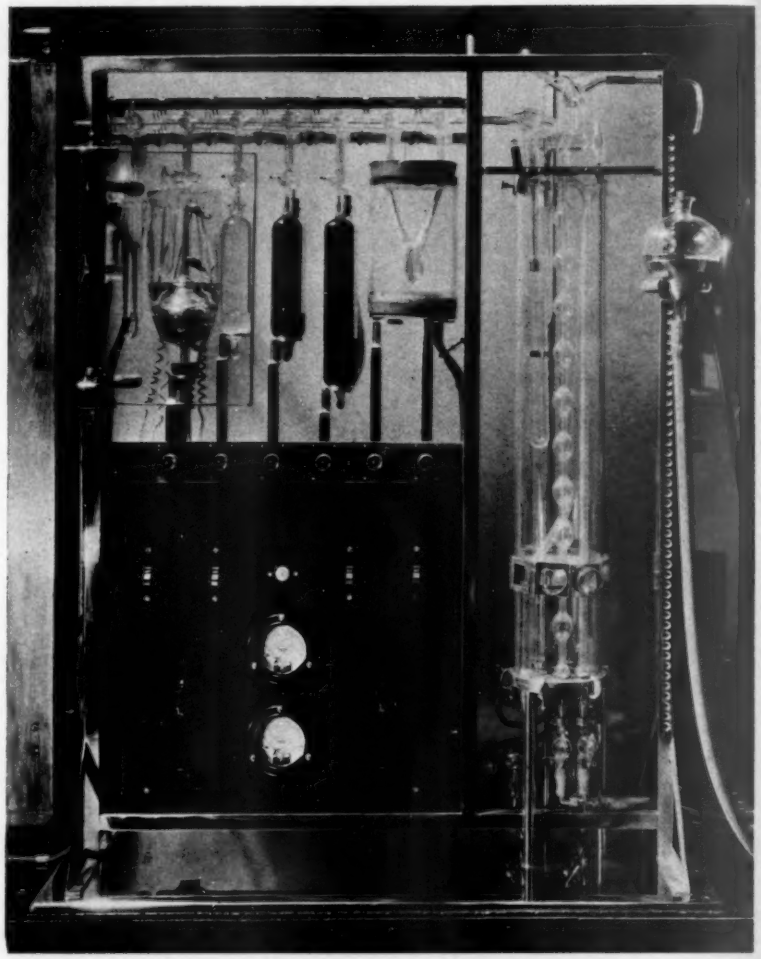


Figure 2—A. G. A. ultra-precision gas analysis apparatus

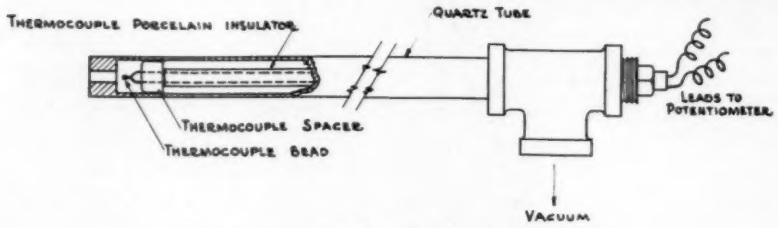


Figure 3—A. G. A. high velocity thermocouple

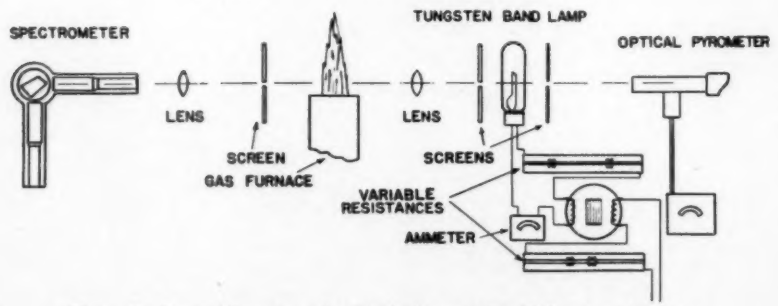


Figure 4—Spectral-line reversal method of measuring high gas temperatures

So for the lower temperature range just mentioned a high velocity thermocouple was developed (see Figure 3) wherein the thermocouple element was placed in a quartz tube with the bead so arranged that the opening available for radiant heat was restricted to the absolute minimum. Then, to insure that the bead had an opportunity of recording the true gas temperature, the whole device was connected to a high vacuum apparatus and the hot gas was inducted into the orifice opening of the tube at high velocity. After a short period of time the element responded to the high temperature of the gas being drawn past it and an equilibrium condition was established that was a true measure of the temperature existing. Excellent as this solution was for

the lower range measuring of gas temperatures, the higher range presented an even greater problem. The final solution was a simple one, yet in its very simplicity is the true worth of the device for the final results need surprisingly little adjustment and correction.

The Spectral-Line Reversal Method of measuring high gas temperatures is wholly a Testing Laboratories' adaptation, though hearty cooperation from the Pittsburgh Experiment Station of the U. S. Bureau of Mines made progress easier and quicker. The final arrangement of this piece of apparatus, shown in schematic form in Figure 4, makes the reading of gas temperatures up to 6,000 degrees Fahrenheit possible, though 3,600 degrees Fahrenheit has been the maximum demand so far.

In operation, finely ground common table salt (solid sodium chloride) is used to color the flue gas stream by injection of the salt into the air-gas mixture where burners employing premixed air and gas were used, and into the air supply for nozzle-mixing burners. When making the observations at the spectrometer, the current input to the band lamp is increased until the bright double spectral lines of sodium just disappear in the band spectrum of the band lamp, the ammeter being read at this point. Then the current input is increased until the spectral lines are distinctly dark upon the bright background of the continuous band lamp spectrum. After this the current input is again decreased until the dark sodium lines again disappear, at which point another ammeter reading is taken. This procedure is repeated for six sets of readings and an average taken to eliminate to a large extent any personal visual error that might exist.

Temperatures up to 3,600 degrees Fahrenheit were thus measured in the research work and the corrections necessary were so few as to make this method of measurement both practical and quick. Those who wish to delve more deeply into the subject are referred to Bulletins Nos. 746 and 748, published by the American Gas Association Testing Laboratories, for further information.

And so the Industrial Research continues. Like all thorough research, it makes haste slowly, yet the definite conclusions that are emerging from this project would not have been possible had not the Laboratories' staff first developed and perfected the apparatus necessary for successful conduct of this work.

Managing Committee to Hold Meeting

THE Managing Committee of the Industrial Gas Section will hold an all-day session Monday, June 7, at the Palmer House, Chicago, Illinois. This will be the last meeting of the Association year. The meeting will be conducted by Ralph L. Manier of Syracuse, N. Y., chairman of the Industrial Gas Section, who urges all members to be present.

Book Review

1937 Pape-Swift Boiler Reference Book.—This 333-page book gives dimensions and ratings of 33 different makes of steam and hot water boilers of all sizes and types. Line drawings and specifications of many new boilers, and of boilers designed especially for mechanical firing are included. Information is given on many obsolete and discontinued boilers not listed in any previous edition. Many boilers having the same number as older models have been changed to meet the requirements of automatic firing. Information concerning these changes is contained in this book which is published and sold by John S. Swift Co., Inc., 105 South Ninth St., St. Louis, Mo.

A master index is included with the present edition covering the 1934, 1935, 1936, and 1937 editions of the Pape-Swift Boiler Reference Books.

Although these books naturally cannot cover all boilers ever made, they should be extremely helpful to any gas man faced with the problem of installing a conversion burner in an existing boiler, or revamping a heating system.

Air Conditioning Group To Meet

THE Process and Comfort Air Conditioning Committee of the Industrial Gas Section will meet at the Palmer House, Chicago, Illinois, Monday afternoon, June 7. L. A. Bickel, secretary of The Dallas Gas Company, who is chairman of the committee, will preside.

Gas Exhibit at Hotel Show

A. G. A. exhibit at Midwest Hotel Show

ONE of the most successful features of this year's Midwest Hotel Show was the interesting and instructive display of modern commercial gas equipment sponsored by the Industrial Gas Section of the American Gas Association in cooperation with The Peoples Gas Light & Coke Company of Chicago. In all, the show drew an attendance of 19,352 to the Hotel Sherman where it was held March 23-26.

Displayed in the gas exhibit were three of the gas industry's important fuel applications, that are of concern and interest to all volume food dispensers. These applications included the gas deck bake oven with thermostatic heat control, gas-fired volume water heaters and gas refrigerators. The latter were featured for additional refrigeration needs where it was more economical to install and operate individual units than to disturb and extend connections to existing central installations.

Of singular appeal to volume hot water users was the exhibit of gas-fired units suitable to supply the particular requirements of this field, where assurance of supply and definite water temperatures are so vitally necessary.

Full advantage was taken of the fact that volume food operators are today more and more leaning toward individuality in their baked goods requirements, to show the latest in gas bake ovens.

This exhibit was organized by the Committee on Displays at National Industrial Expositions of the Industrial Gas Section. H. A. Sutton is chairman of this committee and T. J. Gallagher, of The Peoples Gas Light & Coke Company, is vice-chairman. The gas booth was under the direct charge of Mr. Gallagher who was assisted by other local gas men and exhibiting manufacturers' representatives.

METER READING ROUTE SHEETS

(Continued from page 183)

number of control in which the address "1426 Wolf Street" is located, and the route book for the same address is noted in the column headed "Route Book."

The second customer (John Smith) moved and gave order to shut off gas at 1526 Ritner Street—moving to 1624 Diamond Street—not using—and requested bill mailed to 1624 Diamond Street, in care of John B. Edwards. This information is entered on Space 2 on reverse side of route sheet—the new address—1624 Diamond Street—with the word "No," and the control and route book should be noted in the proper columns, and on the next line "c/o John B. Edwards."

Space for Journal Entries is divided into columns as follows: Date, Journal Entry Number, Cubic Feet Journalized, and the Amount (in dollars and cents). All Journal Entries are entered in like form. We find this very useful in future adjustment of customers' accounts.

Transfer of Route Sheets

The next problem that confronted us was the method to be used covering transfer of meter route sheets. I feel that this has always been a source of annoyance to any company, but a necessary routine that has to be accomplished promptly and within scheduled time. In designing the sheet, it was decided that a three-year set-up would be the best covering transfers, as it would be possible to spread transferring over a longer period. A schedule was prepared whereby a number of meter route books are transferred each calendar month, beginning with October of each year and ending the following May, making a total of eight months transferring each year. No transfers are scheduled for June, July, August and September on account of vacation peaks. The clerks assigned to transfer are used to relieve other clerks, who are in turn given an opportunity to cover a position higher than their own, which offers a splendid opportunity for employee training.

The method of transferring prior to centralization was to us the present force and some temporary clerks that were hired for this particular purpose. This resulted in a large number of errors. In order to eliminate these errors it was decided that a permanent force of transfer clerks be established, which in turn provided us with the means of assigning older clerks whose productivity and ability could not be used upon faster scheduled work, but whose legibility of writing made them the opportune clerks to use covering meter route book transfer. In fact, it was a means of taking care of some of our older employees, for whom it is always hard to find a suitable assignment, especially in those times, when the matter of economical operation is always foremost in Management's mind.

Assigning of older employees to this work was the means of creating a more correct transfer of meter route sheets, for they realized that we were trying to do something for them in order to keep them in productive positions. It also eliminated the necessity of using clerks that had a regular scheduled production position or assignment, whereby they were required to work overtime, thereby lessening their efficiency the following day. It is very poor policy to work any clerks, who are on a scheduled production basis, overtime for any period of time, as it results in inaccuracies which must be avoided.

Accuracy—with a capital "A"—is the big aim of our transferring job. There are numerous chances for errors in the spelling of all those names, initials, addresses, meter numbers, set and remove dates, but we're mighty careful in our effort to get every letter and figure exactly right because to us they're not just names and numbers—they're customers and revenue producers.

Before transferring any meter route book, the sheets are checked for wrong Sales classification, etc., addressograph plate tagged with correct classification symbol, and sheets then run correctly.

Further comments, descriptions, etc., might be made covering this subject, but space does not permit going into greater detail, but we do hope that it will be of some benefit to those readers who are faced with this problem, and if we can supply them with any further information, we are only too glad to have them communicate with us.

A meter reader of a large gas company recently said there are two kinds of dogs, one kind bites you on the way in and the other on the way out.

NATURAL GAS MAKES NEW RECORDS

(Continued from page 166)

field has been estimated at twenty-five years, that of the Mid-Continent, including north Texas and Louisiana, at fifty years and that of the California reserves at twenty years. Some years ago much more gloomy estimates of oil reserves were made—only to go by the board as new fields were discovered or deeper drilling was resorted to. The country would have been out of petroleum a decade ago if early "estimates" of reserves underground had proved accurate.

The same possibility of error is present in estimates of natural gas reserves, although competent engineers are of the opinion that at least in the Appalachian field new and important gas discoveries are unlikely. Since this field is closest to such potential big markets as New York and Philadelphia, the adequacy of its reserve may be subject to doubt. On the other hand, natural gas from Texas is today being burned every day in Chicago and Detroit and there would be no engineering reason why the eastern markets need be wholly dependent on Pennsylvania and West Virginia gas. On the whole, there is no more reason to question the adequacy of the national reserves of gas than to question the adequacy of our crude oil reserves. Neither will run out for many, many years.

On the political side, the natural gas industry has thus far remained far more immune to attack than the electric power industry. The various companies in the industry are, of course, subject to a variety of intra-state regulation and some degree of Federal regulation of interstate pipe lines, probably under the Interstate Commerce Commission, very likely will eventuate sooner or later. But natural gas is cheap and its price has not become a political football, possibly because fewer votes are involved than in the case of domestic electricity or possibly because it simply does not fit as well as electric power into the dramatized role of public villain. There are no "TVA's" or other yardsticks in natural gas and while a considerable number of municipalities have a yen for going into the electric power business none seems inclined to tackle gas.

The Laclede News Makes Bow, Describes Company's History

B. F. Pickard

MAKING its bow on the occasion of the observance of the company's 100th anniversary, *The Laclede News*, new employee publication of the Laclede Gas Light Company, St. Louis, Mo., contains much valuable and interesting information on the company's activities and history. The publication is edited by R. D. Lewis, advertising manager, and Volume 1, Number 1, is distinguished by a stirring introductory editorial by B. F. Pickard, operating executive of the company.

Of special interest to many old time gas men will be the following historical facts concerning the use of gas in St. Louis, taken from the "News":

Seventh Gas Company in U. S.

"The first gas company in St. Louis, the seventh city in the United States to have a gas works, was incorporated February 4, 1837. It was then called the St. Louis Gas Light Company, but according to the best information obtainable, actual distribution of gas did not start until 1846 when a contract was signed with the city to light the streets.

"Twenty years later another company was formed and was called The Laclede Gas Light Company in honor of the founder of the city. By an act approved March 26, 1868, the franchise of the company was made perpetual and its privileges extended throughout 'the corporate limits of the City of St. Louis, as the same are now and may hereafter be established." A third gas company, known as The Carondelet Gas Company was incorporated March 3, 1857 to serve the extreme southern part of the city.

"In 1889 The Laclede Gas Light Company was reorganized, and took over the St. Louis Gas Light Company and The Carondelet Company.

"Gas played an important part in the late '80's in the city's greatest festivity, The Veiled Prophet's Parade. The route of the parade was lighted by gas and some of the old timers, including William S. Dodd, former treasurer, tells how he, with William Cook, helped prepare for this event. A pipe was attached vertically to the top of each street lamp and other shorter pieces of pipe joined to this in the same manner that limbs extend from the trunk of a tree. Then to these arms lighting fixtures were attached. A tremendous arch was erected at Eleventh Street and Washington Avenue, in the center of which was the outline of an eagle in flaming gas jets. In order to accomplish this feature stroke, an artist drew the outline of an eagle on the floor of the shop and Mr. Dodd and Mr. Cook heated gas pipes and bent them to conform to the outline on the floor.

"The Laclede Company was headed by John P. Keiser, a colorful character who had been a steamboat captain.

"When the companies were reorganized in 1889, Captain Keiser was succeeded by Emerson McMillan, who came to St. Louis from Columbus, Ohio. He was a Civil War veteran, having served with Custer's Cavalry.

"In 1903, control of the company passed to the North American interests and F. M. Cowdery became vice-president and general manager; John I. Beggs of Milwaukee was a vice-president; Charles L. Holman, secretary and Charles A. Tucker, treasurer.

"In 1907 Mr. Cowdery resigned and was succeeded by Mr. Holman. It was not until this time that the company actually took over the physical properties of the Carondelet Company, and in anticipation of greater development had purchased the site of the present coke plant at 526 East Catalan Street. The plant was later constructed in 1916 and the old Carondelet plant was dismantled.

"In 1909 The North American disposed of its interest to a group of local men represented by G. H. Walker & Company, a St. Louis firm. These men were at the head of the company until control of the stock was purchased by C. A. Monroe and associates in 1924, and later sold to the Utilities Power & Light Corporation in 1927.

"George B. Evans, who succeeded Mr. Holman as president in 1925 came to St. Louis in 1903 to assist in the construction of a holder. He remained with the company, later holding jobs as plant superintendent, chief engineer and vice-president and general manager.

"Mr. Evans resigned in December, 1931 and was succeeded by E. P. Gosling. When Mr. Gosling resigned in December, 1936, B. F. Pickard was named operating executive."

Indiana Utility Shows Improved Position

IN the annual financial report of the Citizens Gas and Coke Utility, Indianapolis, Indiana, Thomas L. Kemp, general manager, points to a great improvement in the position of the company over the previous year. Net income for 1936 was $554,186.20 compared with a loss during 1935. The number of meters in service December 31, 1936 was 80,230, a new record, as compared to 77,256 on December 31, 1935. Appliance sales have advanced 265 per cent, Mr. Kemp said, and forty-two and six-tenths miles of mains have been installed during the year.

An attractive pamphlet entitled "Making the Gas Utility Your Business," which recounted the accomplishments and progress of the company during the year was distributed to the public along with the annual report.

SEATTLE'S WINDOW DISPLAYS

(Continued from page 172)

around this idea several times. Each time in a different way. Each time it has been built around an idea—or plot. Our "Two Baths for a Nickel" is still a good show idea though it has been seen here and elsewhere many times. This display is now non-existent, its mechanisms having been reassembled into other displays. Twelve separate movements completed the cycle of this show in one revolution of a shaft bearing four specially cut cams, two shadow drums and a band switch, all driven by a small one-twentieth horsepower motor.

Our newest display is "There's Nothing Like Gas for Water Heating." We think the pictures sufficiently explain the action so that anyone who is mechanically minded could assemble such a display for himself. The upper panel shows a parade of a family of eight, including a nurse from the sick room and the family dog and cat. They are all interested in personal cleanliness and comfort. At the right of the display are arranged a dish pan, washing machine and scrubbing pail—each filled with the proper amount of hot water from the faucet. They are illuminated—each in its turn—as the storage tank in the heater section begins to empty its contents.

Space heating and air conditioning offer no end of possibilities for real showmanship. We are now building ideas for these displays which will be used this summer and during the fall. Perhaps it will be possible to describe them at some later time.

Complete plans for building these animated displays, as well as pictures illustrating the various steps of action, are available to those who may be interested.

We use gas exclusively in our house for cooking, hot water and even heat.—Mrs. D. L., Danbury, Conn.

Personnel Service

SERVICES OFFERED

Accounting, Auditing, Bookkeeping, Clerical and Office Workers

Manager—**accountant.** Sixteen years' experience as chief accountant of large gas and electric corporation. Three years as general manager, both gas and electric. Established record for public relations. Thoroughly qualified to handle all types of plant and distribution construction.—Gas. Full detail experience, references on request. **1117.**

Advertising, Publicity and Public Relations

Advertising and **sales promotion.** 8 years' experience with outstanding firm of merchandise counsellors well known for work in gas appliance field. Creative writer: consumer advertising, direct mail, publicity, radio scripts. Market surveys and sales analysis. Experienced in promotion of all domestic commercial gas, electric appliances. **1122.**

Chemists, Physicists and Research Workers

(Classification records available)

Engineers

Gas engineer (B. E. E.) four years of varied experience in production department of an electric utility and four years' erection, maintenance and operation experience in production department of large water gas plant. Cadet engineer and plant foreman. Desires new connection. Married (28). **1113.**

Gas engineer. 15 years' experience in all branches of the gas industry, manufactured and natural. Expert designer and operator of equipment and distribution systems. Good appraisor and estimator, map worker and surveyor. Trained for office and shop. **1121.**

Managers and Superintendents

Experienced gas engineer operator and **manager.** Actual experience coal gas, water gas, transmission and distribution construction, operation and maintenance, chemical laboratory, selling, servicing, and installation of gas appliances, office routine billing, consumer's ledger, collecting, daily and monthly operating and financial reports, and budgets. Invites interview. **1098.**

Manager—With twelve years' experience in the supervision of all branches of the gas business, including **commercial** and **merchandising,** coal and water gas manufacture and distribution and new main and service extensions. Also natural gas production and operation. Present connections such, services available short notice. **1103.**

Salesmen and Sales Engineers

Fourteen years' experience in gas and coke oven work. Thoroughly trained in operation, maintenance and repairs of coke ovens, producers and water gas plants. Considerable experimental work in this field, including **coke sales.** Desire suitable position with utility and opportunity for advancement. College graduate; married. **1097.**

Twenty years' experience as executive in small utilities covering management, finance, construction and sales work. Recently represented a national manufacturer of gas equipment as division **sales manager.** Prefer executive or sales work. Will go anywhere on short notice. **1109.**

Fifteen years' experience **sales engineering,** supervision and management natural and manufactured **industrial** gas utilization field. Present employer large utility holding company primarily electric where opportunity advance limited in gas work. Available on short notice. Reliable, sober, industrious, excellent education, experienced, ambitious. Can demonstrate results on sales. **1112.**

SERVICES OFFERED

Salesmen and Sales Engineers

(continued)

Supervisor or sales engineer. Have had several years' experience in industrial, commercial, householeating and domestic sales. Am familiar with design, layout and installation of equipment. Graduate engineer and married. Desire to be associated with a utility or appliance company. **1116.**

Salesman or selling agent, **representing manufacturer** of gas appliances, water heaters, ranges, gas fired boilers, and the full lines. Have established trade for past 15 years in metropolitan area, New York and 200 mile radius with wholesalers, retailers, and gas companies. Volume of sales and highest references on file for inspection. **1120.**

Manufacturer's salesman—competent, aggressive, experienced in national distribution. Familiar with volume selling to utilities. Gas appliances, plumbing or heating supplies or specialties. 12 years as salesman, sales promotion man and sales manager, with leading manufacturers. **1123.**

Sales engineer of long experience wants to represent manufacturer of boilers, conversion burners and industrial equipment in New York Metropolitan territory. **1124.**

Gas sales engineer. College graduate, experienced in marketing natural gas to institutions for heating; oil refineries, glass and paint companies; ceramic, ice and power plants, salt companies and heat treating plants. Familiar with design and installation of metering and burning equipment. **1125.**

Sales engineer. Will go anywhere, with gas company or manufacturer. Graduate engineer, excellent record, broad experience in the gas industry. Familiar with competitive fuels. Capable of supervision of sales, installation and servicing of commercial, heating, air conditioning and industrial equipment. Reliable, industrious and can demonstrate results by sales. **1126.**

Sales engineering experience in **industrial** and house heating fields, specialist in gas fired steam boiler applications; 18 years' experience with two of the largest gas companies. Thoroughly familiar with utilization, research and testing; technical instructions to company sales and maintenance personnel and making and following up installations. Married. **1127.**

SERVICES OFFERED

Salesmen and Sales Engineers

(continued)

Manufacturer's representative, 15 years' experience within a fifty mile radius of New York City, knows plumbing supply jobbers, gas companies, plumbers and architects. Can open new channels of distribution to dealers and jobbers which tentative local developments may soon require on gas ranges and other equipment. **1128.**

Miscellaneous

With gas company anywhere; capable of gas main **construction** or **maintenance,** any class pipe, or the **installation** of modern gas appliances. Understand thermostats and gas refrigeration, water heaters, etc. I have years of experience behind me and can deliver the goods. Footloose and free. **1108.**

As **working foreman** or general utility man in plant of 200,000 to 500,000 Cu.ft. daily send out. Fifteen years' experience at making gas, welding, laying mains, installing and servicing gas appliances. Assisted in complete rebuilding of one plant. **1114.**

POSITIONS OPEN

Industrial combustion engineer to lay out and conduct research work on industrial gas applications. Location—Ohio. Must be technical graduate with several years' experience in industrial department of gas company. Age preferably 30 to 35. Good opportunity for advancement. State age, experience in detail and salary expected. **0318.**

Small Eastern gas company is desirous of securing capable **service man** who is speedy, reliable and trustworthy, capable of doing his work well without subsequent checking up, and who also has **sales** ability. $15.00 to $18.00 a week to start, with 5% to 10% commission on sales, depending on his ability in consummating sales of a reliable nature that would stay sold without reverts. Must be an American, preferably married, with stick-to-it-ive-ness. **0319.**

Sales and **service engineer** to handle on commission basis line of industrial furnaces in mid-west territory. **0320.**

Cadet engineer—natural gas utility in Oklahoma, geology, transmission, and leakage survey work. State education and salary required. **0321.**

Industrial gas engineer, natural gas experience, for natural gas company located in state of Ohio. State age, experience and enclose photograph with application. **0322.**

THE CONSULTANT

The American Gas Association is sometimes requested to furnish the names of consultants competent to advise and assist in public utility matters. These requests come from gas companies, municipal officers, public service commissions, financial houses and others.

It is, and always has been, the practice of the Association to furnish several names from which the inquirer may make a selection. The Association does not recommend any individual, believing the needs of each situation can best be met by furnishing a list of names, addresses and concise details of available consultants. The selection and negotiations are then undertaken by the prospective clients, the Association acting only as a clearing house.

For our records and for this use, the Association will be glad to receive from those interested in being so listed some details and a general outline of qualifications and experience as consultant or expert witness, as for example a copy of qualifications as filed in any recent case.

Letters should be addressed to the Managing Director.

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